

The University of Chicago

THE MAJOR OUTLYING BUSINESS
CENTERS OF CHICAGO

A PART OF A DISSERTATION SUBMITTED TO
THE FACULTY OF THE DIVISION OF THE
PHYSICAL SCIENCES IN CANDIDACY FOR
THE DEGREE OF DOCTOR OF PHILOSOPHY

DEPARTMENT OF GEOGRAPHY

1936

By

MALCOLM J. PROUDFOOT

Private Edition, Distributed by
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Section 1. The Purpose

The City of Chicago forms a 211 square-mile crescent of urban land indented by Lake Michigan on the east and inclosed on the north, west and south by an irregular municipal boundary. This area is inhabited by approximately 3,300,000 people who live a specialized interdependent existence; an existence made possible by a highly integrated intra- and extra-city net of transportation and communication. Serving the daily commodity and service needs of these three million and more city dwellers are a number of areas of business concentration. These grade in size from the Central Business District with dominant city-wide importance, to the Major Outlying Business Centers with inter-community importance, to the neighborhood business streets with only community significance. It is the purpose of this dissertation to present a twofold analysis of the Major Outlying Business Centers of Chicago. The first analysis seeks to discover the general character of the centers as a group on the basis of their street frontage use, and to relate their character to the spacial, populational, and transportation setting of Chicago. The second analysis seeks to discover the specific functional character of a center selected as a case study representative of the centers as a group.²

Section 2. Preliminary Procedure and Methods

Recognizing and Locating the Centers.---Two sources, in part, aided in identifying the major outlying business centers of Chicago. These were: (1) a market analysis of Chicago by districts, published by the General Outdoor Advertising Company,³ and

¹This is an abridgment of the author's doctoral dissertation, which in its complete form consists of 240 pages, containing 32 maps, 35 pictures, and 71 tables.

Throughout this study the term business is used to mean the combination of retail and service functions as apart from wholesale, manufacturing, and industrial functions.

²This study is based on field work conducted during the spring, summer, and fall of 1933. The data therefore represent the low point of the depression.

³Twenty-One Cities Within the City (Chicago: General Outdoor Advertising Company, 1929).

(2) Olcott's Land Value Blue Book of Chicago, showing the front foot valuation of every city block.¹ These sources guided a reconnaissance of each center; and as a final check every street car intersection in the city was inspected. The corrected list designated twenty centers as major (Fig. 1), and ninety-two as minor.²

Mapping and Delimiting the Centers.--In mapping the centers, a street frontage profile method was utilized.³ This method was deemed practical because mapping nearly fifty miles of street frontage necessitated a rapid, yet accurate method, to insure data comparable in time, and because the horizontal frontage occupied by each kind of property use was considered an adequate measure of its importance, since rents and taxes are paid on this basis, and building depths and story heights are essentially uniform.⁴

The central nucleus of each major center possesses a marked multi-storied concentration of diverse kinds of large retail and service establishments depending on customers from a wide area. The boundaries of the major centers vary considerably in character. In many cases the boundaries are difficult to establish owing to their transitional character. The solution of the problem required the inclusion of the large establishments characteristic of the centers, and the exclusion of all other types of land use. For clarity in classification, the following seven boundary types were recognized and named according to the type of land use which was excluded: (1) the Neighborhood Business

¹George C. Olcott, Olcott's Land Values Blue Book of Chicago (Chicago: G. C. Olcott Co., 1933).

²All centers characterized by business frontage typical of the largest outlying business centers, and possessing over one mile of such horizontal frontage when combining the frontage of all stories, were considered to be major centers. All centers with a combined horizontal frontage of less than one mile were classified as minor centers. This distinction seemed expedient and it was borne out by the character and appearance of the centers mapped.

³A. E. Parkins, "Profiles of the Retail Business Section of Nashville, Tennessee," Annals of the Association of American Geographers, XX (1930), 164-175.

⁴A map scale of 1:1400 was employed. The frontage taken by the individual establishments, residential use, and vacant property, was paced off and corrected to known distances measured from the 1:24000 U.S.G.S. base maps of Chicago. By this method a three-story building with fifty feet of frontage represents 150 feet of combined frontage.

Boundary; (2) the Residential Boundary; (3) the Vacant Property Boundary; (4) the Wholesale Boundary; (5) the Congregational Boundary; (6) the Transportational Boundary; and (7) the Passive Boundary.¹

Classifying Street Frontage Use at the Centers.--After locating, mapping and delimiting the major centers, it was necessary to classify the 174 individual kinds of street-frontage-use occurring within them. The classification devised, recognizes nine classes of street frontage based on commodity use and service function: (1) the Retail for Internal Use class, which is designed to include all establishments retailing commodities to be consumed internally by human beings; (2) the Retail for Personal Use class, which is designed to include all establishments retailing commodities considered as constituting personal belongings; (3) the Retail for Group Use class, which is designed to include all establishments retailing commodities for the use of groups, in direct contrast to those having a strictly personal use; (4) the Retail for Multiple Use class, which is designed to include all establishments retailing commodities of such a wide variety that they would be included in several of the preceding classes; (5) the Personal Service class, which is designed to include all frontage occupied by persons rendering service of a personal nature, such as doctors, dentists, barbers, etc.; (6) the Group Service class, which is designed to include all frontage occupied by persons or firms rendering service to family or business groups; (7) the Recreational class, which is designed to include all establishments offering amusement or recreation to their patrons; (8) the Residential class, which includes upper story apartments and transient hotels; and (9) the Vacant Property class, which includes all vacant or unused frontage whether in the form of buildings or vacant lots.

Section 3. The Urban Setting of the Centers

In order to understand the distinctive retail and service

¹M. J. Proudfoot, "Outlying Business Centers of Chicago," Journal of Land and Public Utility Economics, XIII (1937), 58, gives a full statement covering these boundary types. Boundaries were based entirely on evidence observed in the field. Land values were not used since, for the most part, they bore little relation to specific land use. Volume of sales data might furnish an excellent basis for delimiting these centers when used in combination with the map record. However, such data by individual establishments may not be obtained and is only available to employees of the Census Bureau who are under oath not to disclose confidential data of this nature.

functions of the major outlying business centers, it is necessary to consider them in their spacial, populational, and transportation relations to the City as a whole.

The Spacing of the Centers Within Chicago.--The centers form an irregular, widely spaced, and yet evenly balanced semi-circle about the mid-point of the Central Business District (Fig. 1).¹ Access to these centers is afforded by a street grid planned to meet the needs of intra-city communication. The entire urban area is grooved by a rectangular street grid. The streets are oriented to the cardinal points of the compass, and as such provide direct connection only in three directions between the Central Business District (blocked to the east by Lake Michigan), and the outskirts of the City. To be sure, twelve diagonal streets afford some direct access to the northwest, southwest, and southeast, but in only two cases do these streets enter directly into the Central Business District. To this broad view must be added the natural complications produced by the shore of Lake Michigan, which abruptly cuts off street after street on the South Side, as well as such man-made interruptions as the Chicago Ship Canal with its numerous slips and warehouses, the many large cemeteries, the frequent railroad and factory yards, and the ill state of disrepair prevalent on many of the residential streets of the City. These conditions are naturally manifested by the differential between the linear spacing of the centers and their actual spacing within the street grid; conditions which favor the commercial function of the centers in competing, not only with the Central Business District, but each with its nearest rival (Tables I and II).

These tabulations show the spacial inter-relationship of each of the twenty major centers to the mid-point of the Central Business District, and of each center to its nearest rival center. Two important conclusions are apparent: (1) that the commercially favorable decentralized condition and isolation of the centers, with reference to the Central Business District, is particularly accentuated by the advantageous differential between linear and actual street distances in Chicago; and (2) that the individual centers, though not favored by an important differential between

¹For purposes of measurement, the intersection of State and Madison Streets was taken as the mid-point of the Central Business District.

TABLE I

THE INCREASE IN MILES FROM LINEAR TO STREET DISTANCE BETWEEN THE MAJOR OUTLYING BUSINESS CENTERS AND STATE AND MADISON

Center	Linear Miles	Street Miles	Increase in Miles
T. Michigan & 111th.....	13.00	14.17	1.17
S. Commercial & 92nd.....	11.00	13.32	2.32
R. Halsted and 79th.....	9.00	10.87	1.87
Q. Stony Island & 67th.....	7.75	8.65	0.90
C. Milwaukee Irving Park & Cicero.....	7.70	8.05	0.35
P. 63rd & Cottage Grove.....	7.00	8.20	1.20
O. Halsted & 63rd.....	7.00	8.84	1.84
A. Lawrence & Kedzie.....	7.00	8.10	1.10
B. Broadway & Wilson.....	5.80	6.15	0.35
F. North & Crawford.....	5.30	5.85	0.55
M. Ashland & 47th.....	5.25	7.80	2.55
N. 47th & South Park.....	5.00	6.20	1.20
I. Madison & Crawford.....	5.00	5.00	.00
E. Milwaukee & Logan Square.....	5.00	5.35	0.35
D. Lincoln Belmont & Ashland.....	4.35	4.75	0.40
K. Roosevelt & Kedzie.....	4.10	4.50	0.40
J. Madison & Kedzie.....	4.00	4.00	.00
G. North: California to Western.....	3.75	4.20	0.45
H. Milwaukee & Paulina.....	2.70	2.95	0.25
L. Halsted & Roosevelt.....	1.40	2.50	1.10
Average.....	5.96	6.90	0.94

linear and actual street distances to and from their nearest neighbors, are nevertheless widely spaced throughout the urban area of Chicago, and consequently enjoy a marked degree of isolation relatively free from the rivalry of other centers.

The Populational Setting of the Centers.--The centers enjoy a marked business advantage of close proximity to the commodity and service purchasing decentralized population of Chicago. This condition is revealed by Table III and Figure 1. It will be noted that nearly 50 per cent of the total city population of 3,376,438, or 1,591,700 people live within one mile of the centers; and that on the average 88,600 people live within one mile of each center, whereas only 24,700 people live within one mile of State and Madison. When the outlying metropolitan population is added to the outlying municipal population, it may be conservatively estimated that two and a half million people living within the Chicago urban area are nearer to the centers than they are to

TABLE II

THE INCREASE IN MILES FROM LINEAR TO STREET DISTANCE BETWEEN EACH CENTER AND ITS NEAREST NEIGHBOR

Center	Near- est Center	Linear Miles	Street Miles	Increase in Miles
T. Michigan & 111th.....	R.	4.10	6.30	2.20
S. Commercial & 92nd.....	Q.	3.50	3.90	0.40
L. Halsted & Roosevelt.....	K.	3.00	3.00	.00
A. Lawrence & Kedzie.....	B.	2.60	2.75	.15
C. Milwaukee Irving Park & Cicero.	E.	2.60	2.60	.00
M. Ashland & 47th.....	N.	2.50	2.50	.00
R. Halsted & 79th.....	O.	2.00	2.00	.00
P. 63rd & Cottage Grove.....	Q.	2.00	2.00	.00
O. Halsted & 63rd.....	R. & P.	2.00	2.00	.00
N. 47th & South Park.....	P.	2.00	2.50	.50
D. Lincoln Belmont & Ashland.....	B.	1.80	2.10	.30
B. Broadway & Wilson.....	D.	1.80	2.10	.30
F. North & Crawford.....	G.	1.75	1.75	.00
E. Milwaukee & Logan Square.....	G.	1.40	1.75	.35
G. North: California to Western...	H.	1.25	1.37	.12
H. Milwaukee & Paulina.....	G.	1.25	1.37	.12
Q. Stony Island & 67th.....	P.	1.10	1.50	.40
I. Madison & Crawford.....	J.	1.00	1.00	.00
J. Madison & Kedzie.....	I.	1.00	1.00	.00
K. Roosevelt & Kedzie.....	J.	1.00	1.00	0.00
Average.....		1.98	2.22	0.21

the Central Business District.¹ This advantage of proximity is directly related to the size and commercial importance of the centers, although this relationship, in the case of individual centers, is modified to a degree by the availability of specific modes of transportation.

The advantage enjoyed by the centers resulting from adjacent densely settled residential areas is augmented by other characteristics possessed by these areas. Seventeen centers are located in peripheral portions of the City where the population density has shown a steady increase since 1920, and only three centers

¹For 1930, the Bureau of the Census records the metropolitan population of Chicago as 4,364,755 inhabitants outside the municipal limits of the City. This metropolitan area, however, represents considerably more territory than the contiguous urbanized area of Chicago. See Clarence E. Batschelet, Fifteenth Census of the United States: 1930, Metropolitan Districts (Washington: Government Printing Office, 1932), 48-51.

TABLE III

THE TOTAL POPULATION WITHIN ONE MILE OF THE OUTLYING
BUSINESS CENTERS AND OF STATE AND MADISON*

Location	Population for 1930
G. North: California to Western.....	131,600
H. Milwaukee & Paulina.....	131,400
N. 47th & South Park.....	128,200
K. Roosevelt & Kedzie.....	122,800
E. Milwaukee & Logan Square.....	103,300
D. Lincoln Belmont & Ashland.....	102,100
P. 63rd & Cottage Grove.....	93,600
I. Madison & Crawford.....	92,500
J. Madison & Kedzie.....	91,500
B. Broadway & Wilson.....	89,300
O. Halsted & 63rd.....	88,200
L. Halsted & Roosevelt.....	86,500
Q. Stony Island & 67th.....	84,000
F. North & Crawford.....	82,600
A. Lawrence & Kedzie.....	81,900
M. Ashland & 47th.....	62,500
R. Halsted & 79th.....	57,500
C. Milwaukee Irving Park & Cicero.....	56,200
T. Michigan & 111th.....	46,600
S. Commercial & 92nd.....	39,800
Total corrected for overlap.....	1,591,000
Average.....	88,600
State & Madison	24,700

*Based on the Population Census of 1930 by Enumeration Districts, taken from Ernest W. Burgess, and Charles S. Newcomb, Chicago Census by Local Communities, Vol. II (Chicago: University of Chicago Press, 1933).

are located within the central zone of decreasing population. In addition, the centers are favored by their proximity to residential land of high value,¹ which indicates the greater buying power of the resident population.

The Transportational Setting of the Centers.--The centers depend in large measure on customers drawn from widely spaced residential areas. It is, therefore, necessary to gain an understanding of how the centers are served by the various modes of intra-city transportation, namely street cars, vehicles, elevated

¹Homer Hoyt, One Hundred Years of Land Values in Chicago (Chicago: University of Chicago Press, 1934).

trains, and motor coaches.

Street car transportation.--Every center is served by at least one street car line, the majority are served by two, and several are served by three such lines (Fig. 2). This gives transportation access in from two to six directions to and from each center. Further, these street car lines are joined by connecting lines which together form a gigantic double-tracked rectangular net, so complete that few inhabited city blocks of the 211 square miles of municipal Chicago are more than a half mile from this transportation. The accessibility of this service, a seven-cent fare, and a liberal transfer policy combine to make street cars of paramount importance as a customer-transporting agent to and from the centers.

On an average, some 25,000 street cars pass the centers each twelve-hour work-day, and 1,250 pass each center during the same period. This traffic ranges from 2,120 cars at the Milwaukee and Paulina center to 521 cars at the Michigan and 111th center. A long average round trip travelling time, via street car, from the centers to the mid-point of the Central Business District, totalling 79 minutes, is an added incentive for many people dependent on this mode of transportation to transact their business at some outlying business center. The heavy traffic and low cost of this transportation stimulates this incentive.

Vehicular transportation.--Every center is located on one or at the intersection of two or more main vehicular arteries. These main arteries each have a vehicular traffic of from 15,000 to 30,000 units per 24 hours, and contrast sharply with the side streets, which carry 1,000 units or less during the same period.¹ The extraordinary concentration and mobility of vehicular transportation on these main streets is better understood when it is realized that this condition largely results from the movement of some 450,000 automobiles, trucks, and taxicabs,² the ownership of which is rather uniformly distributed over the inhabited areas of the city at an average rate of 2,000 per square mile.³

¹M. McClintock, Map of the Vehicular Traffic Flow on the Principal Routes of the Greater Chicago Traffic Area (Chicago: General Outdoor Advertising Company, 1930).

²The Daily News Almanac and Year Book, 1934 (Chicago: Chicago Daily News, 1934), 372.

³Vehicular registration count by square miles, as of July 1, 1929, furnished through the courtesy of B. L. Robbins of the General Outdoor Advertising Company, Chicago, Illinois.

On the average, some 341,000 vehicles pass the centers from 7 A.M. to 7 P.M., based on an estimated two-thirds of the total for 24 hours, and 17,000 pass each center during the same period. This traffic ranges from 29,000 vehicles at the Lincoln Belmont and Ashland center to 5,000 at the North between California and Western center. The privately owned nature of most vehicles, the excellence of the boulevard systems and synchronized stop lights of Chicago, make an average vehicular speed of 20 miles per hour probable. At this speed and based on the shortest street distances, the average round trip from each center to the mid-point of the Central Business District requires 42 minutes. This rapid round trip might be a detriment to the centers if it were not off-set by the parking difficulties found in the central district; so that the heavy vehicular traffic passing the centers, where an abundance of nearby parking space is available, functions to their advantage.

Elevated transportation.--Elevated transportation, which primarily is oriented with reference to the Central Business District, is lacking in inter-connecting lines, and consists of four main spurs running from the Loop to the north, west and south, serves only nine centers. In addition this service is rendered at the inconvenience of a climb to a second-story platform, at a high fare,¹ and, in three cases, requires a five-minute walk. These conditions, and particularly the centrality of the orientation of the elevated lines which gives this mode of transport a rapid route to the Central Business District, functions as a detriment to the growth of the outlying business centers.

Motor coach transportation.--Motor coach transportation, as in the case of the elevated lines, is likewise oriented by its spoke-like routes to best serve the Central Business District, and to function largely as a detriment to the commercial growth of the centers. Fortunately for the centers, only six of their number are served by motor coaches.²

¹The differential between elevated and street car fares has been lowered since this study was made.

²In addition to the elevated and motor coach lines, the suburban service of the Illinois Central, the Rock Island, the Chicago Northwestern, the Burlington and the Chicago Milwaukee and St. Paul railroads operates as a detriment to the growth of the outlying centers. This is particularly manifest at the Stony Island - 67th center, the small size of which in large measure re-

TABLE IV
THE RANK OF EACH MODE OF INTRA-CITY TRANSPORTATION BASED
ON ESTIMATED PASSENGER TRAFFIC PASSING THE CENTERS
DURING AN AVERAGE TWELVE-HOUR WORK DAY

Mode of Transportation	Passengers	Per Cent
Street car.....	1,006,000	44.9
Vehicular.....	852,000	38.0
Elevated.....	342,000	15.2
Motor coach.....	41,000	1.9
Total.....	2,241,000	100.0

A comparison of the modes of transportation.--To further bear out the above statements pertaining to the relative importance of the four modes of transportation serving the centers, it is significant to make a comparison based on estimated passenger traffic passing the centers. Allocating 2.5 passengers to each vehicle, 40 passengers to each street car and elevated car, and 25 passengers to each motor coach, Table IV shows the outstanding importance of street car and vehicular transportation, which carries approximately 82.9 per cent of the passengers passing the centers, and the minor importance of the centrally oriented elevated and motor coach transportation.¹

Transportational ranking of the centers.--By giving a composite ranking of the centers based on all four modes of intra-city transportation, discounting the figures somewhat due to the inclusion of passengers transported by elevated trains and motor coaches, it is striking to find that an average of 112,000 passengers enter, leave or pass by the centers each day; and that there is a maximum variation of 183,000 passengers passing the Broadway and Wilson center, and a minimum of 43,000 passing the Michigan and 111th center, with a gradual gradation for the other centers between these two extremes.²

flects the detrimental effect of the Illinois Central service to the Central Business District. Other outstanding examples are to be found at 71st and Jeffery, Ashland and 95th, and at 63rd and Dorchester.

¹Estimates all as of May, 1934, furnished through the courtesy of F. A. Porty of the Chicago Surface Lines, C. E. Thorney of the Chicago Rapid Transit Company, and P. J. Boesen of the Chicago Motor Coach Company.

²In addition, it should be remembered that a large propor-

Section 4. An Analysis of the Centers

The 45.06 linear miles of street frontage use within the centers as a group is divided into the classes shown by Table V. By combining the percentages, one notes that the retail classes comprise 41.5 per cent, and the service and recreational classes comprise 26.5 per cent. The high proportion of vacant property, comprising 17 per cent, is probably in part accounted for by the depressed real estate and general business conditions prevailing during 1933; whereas the rather high proportion of residential frontage indicates the pressure of city population for dwelling space.

Individual Kinds of Street Frontage Use.--By ranking the individual street frontage use by classes, and by showing the importance of each individual kind of street frontage use within each class, it is possible to gain a detailed understanding of the functional structure of the centers. This analysis is rendered still more complete when the classes of street frontage use at the centers, by stories, are compared to the average of all stories.

Retail for internal use.--The street frontage occupied by establishments of the retail for internal use class comprises 4.73 miles, and divides among fifteen principal kinds of use, of which restaurants and drug stores comprise 46.3 per cent.

Retail for personal use.--Establishments of the retail for personal use class comprise 4.91 miles of street frontage. This frontage divides among eleven principal kinds of use which women's and men's clothing stores dominate with a combined total of 65.8 per cent.

Retail for group use.--The street frontage used by establishments of the retail for group use class comprises 4.33 miles, and likewise divides among fifteen principal kinds of use, of which furniture stores and auto sales establishments outrank all other kinds with a total of 57.8 per cent.

Retail for multiple use.--The retail for multiple use class of street frontage comprises 4.73 miles, and divides among five-ten and dollar stores, totalling 61.8 per cent; Maxwell Street push cart frontage, totalling 28.7 per cent; and department

tion of the 1,591,000 people residing within a one mile radius of these centers (Table III) probably walk to them each day.

TABLE V
THE CLASSES OF STREET FRONTAGE USE AT THE CENTERS

Class of Frontage	Per Cent
Vacant Property.....	17.0
Residential Use.....	15.0
Personal Service.....	14.1
Retail for Personal Use.....	10.9
Retail for Internal Use.....	10.5
Retail for Multiple Use.....	10.5
Retail for Group Use.....	9.6
Group Service.....	7.5
Recreational Use.....	4.9
Total.....	100.0

stores, totalling 9.5 per cent. In spite of the low proportion occupied by department stores, their presence serves to impart an appearance of commercial importance to the centers, akin in a minor degree to the appearance of the Central Business District.

Personal service.--The personal service class of street frontage use comprises 4.73 miles, and divides into sixteen principal kinds of use, of which that occupied by the offices of doctors and dentists comprises a total of 48.8 per cent. This class of frontage is largely localized in the upper stories of the centers.

Group service.--The group service class of street frontage use comprises 3.38 miles, and divides into fourteen principal kinds of use, of which none is particularly outstanding. However, currency exchanges (banks prior to November 1929) and furniture storage warehouses head the list with a combined total of 36.8 per cent.

Recreational.--The recreational class of street frontage use comprises 2.21 miles, and divides into six principal kinds of use, which are outstandingly dominated by motion picture theaters with 66.1 per cent of the total frontage.

Residential.--The residential class of street frontage use comprises 6.76 miles. This frontage, which is large in total, but insignificant in function, divides between apartments taking 67.3 per cent, and hotels taking 32.7 per cent, respectively.

Vacant property.--The vacant property class comprises a large total of 7.66 miles of street frontage, which divides into:

vacant business property, totalling 83.0 per cent; vacant residential property, totalling 14.5 per cent; and vacant lots, totalling 2.5 per cent. These conditions serve to indicate the intensity of land use at the centers by the small amount of vacant lot frontage, and the over-developed or depressed business conditions by the abundance of vacant business property.

The rank of the individual kinds of street frontage.--The fifteen leading individual kinds of used and idle street frontage, as shown by Table VI, comprise 31.91 miles, or 70.8 per cent of the total frontage within the centers. Of these, seven comprise nearly one-half of the combined frontage.

Analysis of Street Frontage Use by Stories.--Urban land use in general is characterized by the use of multi-storied buildings. This is particularly characteristic of the major outlying business centers of Chicago. Due to this vertical concentration of land use, an analysis of the functional structure of the centers remains incomplete until this structure is revealed by stories compared to the average of all stories.¹

The first story.--The street level frontage of the centers comprises a total of 20.83 miles, or 46.2 per cent of the total frontage of all stories within the centers. By comparing the street level frontage to the total frontage of all stories it was found that the former frontage is characterized by: (1) a concentration of retail establishments, among which those retailing commodities for personal use predominate; (2) a concentration of service functions above the street level; (3) a virtual absence of residential use; and (4) a relatively healthy condition of land use indicated by the presence of only 10.3 per cent of vacant property in contrast to the average of 17 per cent for all stories of the centers combined.

The second story.--The second story frontage totals 13.74

¹Since it is necessary throughout this section to make comparisons between the use of individual stories and the average of all stories, and between individual centers and the average of all centers, the descriptive words healthy, unhealthy, and normal will be frequently used. The best single index to the health of urban land use, in the opinion of the author, is the proportion taken by idle land or property. In each case the norm used is the average per cent of idle land or property of the total of such land in question. Deviations above or below this norm characterize the level of land use, or the land use of individual centers, as healthy or unhealthy.

TABLE VI
THE MOST IMPORTANT INDIVIDUAL KINDS OF STREET
FRONTAGE USE AT THE CENTERS

Street Frontage Use	Per Cent
Vacant Business Property.....	14.7
Apartments.....	9.5
Five-Ten & Dollar Stores.....	8.3
Women's Clothing Stores.....	4.8
Hotels.....	4.6
Furniture Stores.....	4.0
Maxwell Street Push-Cart Frontage..	3.8
Dentists' Offices.....	3.7
Motion Picture Theaters.....	3.1
Restaurants.....	2.8
Doctors' Offices.....	2.8
Men's Clothing Stores.....	2.6
Vacant Residential Property.....	2.5
Shoe Stores.....	2.0
Drug Stores.....	1.6
All Others.....	29.2
Total.....	100.0

miles and comprises 30.5 per cent of the total frontage of the centers. By comparing the second story frontage to the total frontage of all stories it was found that the former frontage shows a marked change in character from the street level. At the second story level personal service becomes dominant, whereas three classes of retail frontage have dropped to insignificant proportions. Likewise, residential use has increased 4 per cent over the average for all stories. Finally a marked increase of nearly 6 per cent in vacant property indicates the relatively unhealthy condition of building occupance at this level.

Above the second story.--The trend away from retail use, noted for the second story, continues above the second story with the exception of department store frontage. Residential use experiences a marked increase of nearly 17 per cent over the average of such frontage for all stories, and comprises a total of nearly 32 per cent of the frontage above the second story. Likewise striking is the steady increase of vacant property from that present at the second story, to a total of nearly 24 per cent for the frontage above the second story, so that, if the per cent of vacant property above or below the average may be used as a criterion

for judging the health of land use at the centers, the frontage of the centers above the second story is in a most unhealthy condition.

Street Frontage Use at Each Center Related to the Urban Setting of Each Center.--Before analyzing the functional structure of the individual centers and explaining some of the factors contributing to their commercial condition, it is necessary to provide an overview of the variations among the individual centers with respect to total size, business concentration, service concentration, and vacant property.

On the average the centers comprise a total of 2.25 miles of frontage, but individually they grade gradually in size both above and below this average. The extreme variation in size is shown by such centers as Halsted and Roosevelt and Halsted and 63rd, which comprise nearly four times as much frontage as such small centers as Madison and Kedzie and 47th and South Park.

On the average the individual centers are characterized by business concentration comprising 68 per cent of their total frontage.¹ Here again, as in the case of size, the proportion of business concentration gradually grades from 81 per cent at the Halsted and Roosevelt center to 44 per cent at the Stony Island and 67th center.

Only the Halsted and Roosevelt, the Lincoln Belmont and Ashland, and the Halsted and 63rd centers have a marked concentration of retail frontage.² At all other centers, retail establishments occupy less than 50 per cent of the total frontage, and these retail uses gradually grade downward to the insignificant total of 18.7 per cent within the Stony Island and 67th center.

With the exception of the Halsted and Roosevelt center, the other centers show a gradual variation in service concentration above and below their average of 21.6 per cent.³ The Halsted and Roosevelt center, however, is almost lacking in service occupancy, a condition which is largely due to the virtual absence of

¹Business concentration is determined by combining the percentages of each center devoted to the four retail classes, the two service classes, and the recreational class.

²Retail concentration is determined by combining the percentages of each center devoted to the four retail classes.

³Service concentration is determined by combining the percentages of each center devoted to the two service classes.

office space occupied by doctors and dentists. In the case of the two centers showing the greatest service concentration, namely Broadway and Wilson, and Milwaukee Irving Park and Cicero, this concentration is explained in the former center by the presence of a twelve-story office building used exclusively by doctors and dentists, and in the latter center by the presence of several large insurance offices occupying several floors of a large corner building.

The range in the percentage of vacant property within the individual centers is wide (Table VII). Using the per cent of vacant property as the index of the commercial health or condition of each center, it is obvious that some centers, as of the depression year of 1933, are commercially healthy, others are to be described as normal, and still others are unhealthy. The healthy centers are six in number (marked Q., A., N., O., M., and F. on Fig. 1), the normal centers are ten in number (T., S., L., D., B., P., J., I., E., and R.), and the unhealthy centers (G., C., K., and H.), though numerically small, possess a marked concentration of vacant property.

The healthy centers.--With one exception (center O.), the commercially healthy centers are below average in size; they possess a most heterogeneous functional structure; and they are widely and irregularly spaced within the municipal limits of Chicago, so that four centers (Q., N., O., and M.), are located on the south and southwest sides, and only two centers (A. and F.), are located on the northwest side of the city. In relating the character of street frontage use at each center to the urban setting of each, the following conditions in part accounted for their healthy commercial condition: (1) the transportational inaccessibility of the residential area surrounding the centers to the Central Business District, either due to the absence of rapid elevated, motor coach, or suburban railroad service, or to the lack of diagonal streets leading directly to the downtown district; (2) relative isolation from competing centers; (3) the presence of heavy street car and vehicular traffic, making the centers in question relatively accessible to the surrounding residential areas; (4) densely populated and prosperous adjacent residential areas; (5) the absence of wide parkways, parks, cemeteries, factory grounds, and railroad yards adjacent to and therefore blocking the growth of these centers; (6) the presence of adjacent

TABLE VII
THE PER CENT OF VACANT PROPERTY AT EACH CENTER COMPARED
TO THE AVERAGE OF ALL CENTERS

Center	Per Cent of Vacant Property	Deviation from Average
Q. Stony Island & 67th.....	5.2	-11.8
A. Lawrence & Kedzie.....	8.7	- 8.3
N. 47th & South Park.....	9.0	- 8.0
O. Halsted & 63rd.....	10.2	- 6.8
M. Ashland & 47th.....	10.9	- 6.1
F. North & Crawford.....	11.6	- 5.4
T. Michigan & 111th.....	13.9	- 3.1
S. Commercial & 92nd.....	14.6	- 2.4
L. Halsted & Roosevelt.....	15.3	- 1.7
D. Lincoln Belmont & Ashland.....	16.8	- 0.2
B. Broadway & Wilson.....	18.4	1.4
P. 63rd & Cottage Grove.....	18.5	1.5
J. Madison & Kedzie.....	20.0	3.0
I. Madison & Crawford.....	20.4	3.4
E. Milwaukee & Logan Square.....	20.7	3.7
R. Halsted & 79th.....	20.9	3.9
G. North: California to Western..	22.2	5.3
C. Milwaukee Irving Park & Cicero	24.4	7.4
K. Roosevelt & Kedzie.....	25.3	8.3
H. Milwaukee & Paulina.....	34.0	17.0
Average.....	17.0	

residential areas populated by foreign born, yet steadily employed, workmen and their families; and (7) the possession of a unique commercial character.

The normal centers.--The commercially normal centers, though irregularly spaced, are rather evenly distributed, with four on the South Side, three on the West Side, and three on the North Side of the City. These centers vary greatly in total size, with six centers above average and four below average in total frontage. In relating the character of street frontage use within each of these centers to the urban setting of each, the above enumerated conditions in part accounted for their relatively healthy commercial condition.

The unhealthy centers.--Three of the unhealthy centers are located on the northwest side of the City (C., G., and H.), one on the west side (K.), and none on the south side. In general these unhealthy centers are of average size, with two somewhat

above and two somewhat below average in total street frontage. In relating the character of street frontage use at each of these centers to their urban setting, the following conditions, which likewise applied to some of the normal centers, were found to be detrimental to commercial health: (1) the transportation accessibility of the Central Business District to the residential areas adjacent to these centers, provided by rapid elevated, motor coach, or suburban railroad service, or due to the presence of diagonal streets providing direct street car and vehicular routes to the downtown district; (2) the proximity of competing centers, as well or better provided with street car or vehicular transportation than enjoyed by these centers; (3) the lack of important street car transfer corners at the heart of one of these centers; (4) light street car and vehicular traffic rendering the surrounding residential areas relatively inaccessible; (5) thinly populated yet prosperous adjacent residential areas; and (6) the presence of wide parkways, parks, cemeteries, factory grounds, and railroad yards adjacent to and therefore blocking the growth of commercial occupation.¹

Section 5. Functions of a Representative Center

It is desirable to analyze the specific functional character of a center selected as representative of the centers as a group. Such an analysis provides a better understanding of the general character of the twenty centers and raises many related research problems.²

¹This investigation points to the definite need for intra-city business tabulations by the Bureau of the Census. This need is recognized and research has been undertaken by this Bureau to the end that permanent intra-city business areas may be established. When such data are available it should be possible, among a host of other practical uses, to draw pertinent comparisons between outlying business centers, the Central Business District, and neighborhood business streets of the City of Chicago, and similarly for other cities. It is recognized that the street frontage occupied by retail and service establishments bears only a partial relation to the commercial importance of such outlets. The basic criterion is the volume of business done by these outlets, and until intra-city census data are available, this and other similar studies can only approximate the results desired of a substantially complete analysis.

²This portion of the manuscript is based on personal interviews with the executive heads of the professional and business establishments of the Madison and Crawford center. Of necessity this abridgment does not carry the full factual and tabular evidence present in complete form in the unabridged dissertation. The complete manuscript is available in Harper Library at the

The Selection of a Representative Center.--Three outstanding characteristics, possessed in common by each center, were noted many times in the preceding sections. These characteristics are: (1) functional structure, or the way in which the street frontage of each center, by classes, is used or remains idle; (2) total size, computed by adding the horizontal street frontage of each story level; and (3) the population density of the surrounding residential area, given in terms of the total population residing within one mile of each center. Taking the average character of all of the centers as the norm in each of these three characteristics, and computing the individual deviation of each center in each of these three characteristics from the average, it was possible to select the most average, and therefore, for the purpose of this study, the most representative center. This most representative center proved to be Madison and Crawford (marked I on Fig. 1).

The Urban Setting of Madison and Crawford.--The Madison and Crawford center lies five miles due west of the mid-point of the Central Business District, and in the heart of a closely built up residential area possessing a medium population density (Fig. 3). Relatively low population densities of from 20,000 to 40,000 inhabitants per square mile encircle the center to the north, whereas to the south, east, and west densities from 40,000 to 60,000 are the rule. In addition, Madison and Crawford is favored by the close proximity of two areas of high population density, one within a half mile to the southeast, and the other to the west. Here densities from 80,000 to 100,000 per square mile are found localized.

Several disadvantageous aspects are to be noted in the population density pattern of the area surrounding Madison and Crawford. Garfield Park to the east, the Chicago Northwestern Railroad yards to the north, and the manufacturing areas to the south limit the immediate customer tributary area of the center by their broad expanse of non-residential property (Fig. 3). More than this, the latter two by disrupting the street grid obstruct populational access from the more distant residential areas to

University of Chicago. The reader will observe, however, that this section of this paper of necessity introduces a greater degree of detail than is introduced in the other sections.

the north and south, and create undesirable living conditions in their immediate vicinity which result in areas of low population density.

The oldest residential sections of Chicago are located in close proximity to the Central Business District. These are characterized by poor grade frame, brick, and stone residences, many in a state of disrepair, and housing, for the most part, poorly paid laboring classes. As one progresses westward, this poor inner residential area gradually improves so that there is a gradation in residential conditions from poor to fair, from fair to good, and from good to excellent. In this setting, Madison and Crawford has a central position between the poor inner residential area, and the excellent outer residential area of the western suburbs.

The marked heterogeneity of residential conditions within the Chicago urban area is clearly exemplified by a detailed map of the immediate area surrounding Madison and Crawford. Figure 4 shows that all four classes are found to exist in a most intermingled relation within one mile of this center. Two classes, good and fair residential, predominate and point to the transitional character of the area, although no clearly defined boundary may be drawn (Table VIII).

It was previously noted that the outlying business centers of Chicago are all focal points of intra-city transportation. The immediate transportation setting of Madison and Crawford is similar in most respects to that of the other centers, for it is crossed by two street car lines, is passed by heavy vehicular traffic on Madison Street, and it is in close proximity to two motor coach lines and one elevated line (Fig. 5).

The transportation setting of Madison and Crawford is favored by only one unique aspect of importance. Crawford Avenue has the most westerly north-south street car line of any considerable length. This extends two miles farther south than the Cicero Avenue line, its more westerly competitor. These circumstances make Madison and Crawford the first important transfer point for passengers using Madison street cars from the west, and the last for passengers using Madison street cars from the east.

Though the transportation setting of Madison and Crawford appears advantageous, it possesses several major handicaps. The first results from the suburban boundaries of Oak Park, Cicero

TABLE VIII
TYPES OF LAND UTILIZATION WITHIN ONE MILE
OF MADISON AND CRAWFORD*

Type	Square Miles	Per Cent
Good Residential.....	1.2243	38.97
Fair Residential.....	0.8793	27.99
Non-Residential.....	.8725	27.66
Poor Residential.....	.1656	5.27
Excellent Residential....	0.0034	0.11
Total.....	3.1416	100.00

*Planimeter computation of Figure 4.

and Berwyn, which encircle the area from one to two and one-half miles to the west and southwest. These boundaries produce a break in transportation lines serving the center and necessitate payment of an extra fare by those using the Madison, Lake, and Cicero street car lines, and the Lake Street elevated line. This extra fare limits the number of people who might otherwise use these low-priced modes of transportation in traversing the distance from their suburban homes to conduct business at Madison and Crawford. Further, the municipal boundary of Oak Park terminates the Washington and Jackson motor coach lines, and limits their transportation usefulness (Fig. 5).

The second major handicap to the transportation setting of Madison and Crawford results from the grid street pattern of Chicago, which is oriented with the cardinal points of the compass. Due to this condition, the shortest linear distance from Madison and Crawford east to the center of Chicago is five miles and corresponds precisely with the shortest street distance (note center I of Table I). This fact coupled with the east-west alignment of nearby motor coach and elevated lines, and rapid vehicular boulevard traffic, places this center in a lane of transportation affording the best access from the West Side to the Central Business District. The well recognized superior attraction of this latter district, coupled with this concentration of rapid transportation, combine to the detriment of business activity at Madison and Crawford. Thousands of east-bound potential customers pass within a short distance, but of these only a very small proportion are attracted by the business functions of Madison and

Crawford.

The Madison and Crawford center represents the chief area of business concentration within one mile of the intersection of Madison Street and Crawford Avenue. Here stores are large, customers are drawn from a wide area, and business activity shows a marked concentration in the intensive use of upper stories by service establishments. Extending from this center, in both directions on Madison Street and Crawford Avenue, as well as on other connecting street-car streets, are first floor business establishments of small size surmounted by upper story apartments. This lack of multi-story business concentration, as well as the presence of small food and service establishments, sets off these sections as neighborhood business streets, serving restricted neighborhood populations.

Eight boundaries were drawn to delimit the Madison and Crawford center (Figs. 6A and 6B). Boundaries I, II, III, IV, VI, and VIII mark transitions to neighborhood business frontage; whereas boundaries V and VII mark a break in street frontage use produced by a manufacturing establishment and a public library.

The Functions of Madison and Crawford.--The Madison and Crawford center, located five miles west of the heart of Chicago, has the functional form of a cross. The axes of this cross are grooved by Madison Street and Crawford Avenue and inclosed by multi-storied buildings housing a heterogeneity of business functions. From its axial intersection there are three short extensions to the north, east, and south, and a long extension to the west broken by two side streets (Figs. 6A and 6B).

A closer examination of this cross-shaped business center reveals other characteristic functional site forms. Madison Street west of Crawford Avenue has a width of 80 feet, and Crawford Avenue, and the eastern end of Madison Street are 52 feet wide, whereas the side streets, Karlov and Keeler Avenues have a uniform width of 48 feet. This condition creates a "bottle neck" in Madison Street east of Crawford Avenue. Auxiliary to each street are cement sidewalks of widths comparable to their function. Further, each block is served by paved alleys having a uniform width of 16 feet. These alleys bisect each block in an east-west direction and only one is limited in usefulness by its "dead end" character.

Facing Madison Street and Crawford Avenue are business

buildings varying in height from one to eight stories. The highest of these buildings are concentrated near the axial intersection of the center, and spaced irregularly on Madison Street west of Crawford Avenue. Nearly every building possesses the typical mid-western box shaped architectural style. Differences in age are noticeable not only in the dingy color of the older buildings, but by the fact that the older buildings were constructed to house apartments in their upper stories. In contrast, two modern structures of eight stories and five stories and a number of two-story buildings on Madison Street were built expressly to accommodate service establishments in well equipped upper story offices. Modern construction trends seem to favor two-story buildings at the center. These now occupy 37 per cent of the total street frontage and predominate over the older three-story structures which comprise 30 per cent.

A large proportion of the first floor frontage of nearly every building facing the two principal streets of the center is devoted to window display space. In addition many stores have increased this display space by constructing glass sided arcade entrances. Store entrances are predominantly in the center of each establishment; whereas entrances to the upper stories, besides being narrow, are located at the sides of the buildings they accommodate. Exceptions are found in the five and eight-story buildings, which, in addition to wide central entrances, are equipped with passenger elevators.

Functional traffic site conditions.--Two important functional site conditions found at the Madison and Crawford center are the east-west alignment of its vehicular traffic, and the marked concentration of this traffic at the intersection of Madison Street and Crawford Avenue. These conditions are related to the variation in street widths noted above, so that the heavy east-bound three-lane traffic on Madison Street meets a two-lane "bottle neck" east of Crawford Avenue. Traffic congestion at this main intersection is reduced by stop lights and a "no left turn" regulation, but east-bound traffic is necessarily retarded and partly shunted southward to continue via Jackson Boulevard. Light west-bound traffic is explained by the narrow condition of Madison Street east of Crawford Avenue, and by the fact that Washington Boulevard, one block to the north, accommodates the over-flow. This functional traffic site condition shows that the Madi-

son and Crawford center is readily accessible by automobile from the west, but relatively inaccessible from the east.

Street cars running on the double-tracked lines of Madison Street and of Crawford Avenue increase traffic congestion at the center. This is particularly noticeable at the transfer corner, where vehicular concentration delays the street cars, and they in turn retard the vehicles. This public mode of transportation also evidences a marked east-west alignment by the fact that during a twelve hour day 397 cars travel both east and west on Madison Street as compared to the 241 from the north and south on Crawford Avenue. In this case there is no variation in the number of cars using Madison Street, as this service is continuous to and from the Central Business District.

Pedestrian traffic serves as a reliable index for determining the suitability of various business locations within the center. All things being equal, the greater the number of people passing a given business location, the greater is its potential business worth. No complete quantitative data were obtained concerning the source of the pedestrian traffic at Madison and Crawford, but obviously it is the combined result of people walking in from the immediate neighborhood, and disembarking from street cars and automobiles which carried them to the center from more distant points within the City and the western suburbs. The variations in pedestrian traffic at Madison and Crawford show the following distinguishing characteristics: (1) that the heaviest pedestrian traffic is at the transfer corners, where between 500 and 3,000 people pass per hour; (2) that the heaviest middle-of-the-block pedestrian traffic is found on Madison Street west of Crawford Avenue, where the range is between 300 and 2,700 persons per hour; (3) that the pedestrian traffic decreases in intensity as the limits of the center are approached; (4) that the highest pedestrian count, at all locations, was recorded on Thursday and Saturday evenings; and (5) that the lowest pedestrian count, each day, was recorded during the morning period.

Business functions.--Acting as an attractive force to the pedestrian traffic at the Madison and Crawford center are a number of business establishments functioning in a wide variety of want-satisfying capacities. These establishments roughly divide into retail and service groups, and further subdivide into seven functional business classes. In ranking these classes it has been

assumed that total street frontage and number of employees are roughly of equal importance; for small establishments with many employees must do a large volume of business to meet payrolls, whereas large establishments employing few persons must do a large volume of business to meet rentals. On this basis it was discovered that the retail business functions of the center are of outstanding importance as a group, and that the Personal Service class outranks any other single class.

In a similar manner the relative importance of the individual kinds of business functions within each class was discovered. This revealed the outstanding importance of: (1) restaurants, a food mart, drug stores, and grocery stores in the Retail for Internal Use class; (2) women's clothing stores, shoe stores, and men's clothing stores in the Retail for Personal Use class; (3) furniture stores, and electrical appliance stores in the Retail for Group Use class; (4) a department store and variety stores in the Retail for Multiple Use class; (5) insurance offices, dentists, doctors, and cleaning establishments in the Personal Service class; (6) furniture storage houses, and realtors in the Group Service class; and (7) motion picture theaters in the Recreational Use class.

The establishments of the Retail for Internal Use class all sell commodities of a perishable nature, consisting largely of a wide variety of foods and drinks, drugs, and tobacco, purchased from Chicago wholesalers who make daily truck deliveries. As a rule these commodities are of standard, nationally advertised brands, carefully packed in paper, tin, wood, and glass containers and sold over the counter to "cash and carry" customers. A small percentage of these perishable commodities are prepared in local kitchens and immediately consumed in restaurants, lunch rooms, and drug stores by customers served at counters and tables.

In general, establishments of this class attract neighborhood business from within a convenient walking distance of the center. The perishable nature of these commodities and the great number of competitive retail outlets scattered throughout the residential areas of the City combine to produce this restricted customer tributary area. The exceptions to this rule are found among the larger stores which advertise in city newspapers and disseminate handbills throughout wide areas, and which have established a good reputation through years of exceptional business

enterprise. Even though these few establishments draw automobile and street car customers from areas five to ten miles distant, they are in most cases dependent on local customers for over 50 per cent of their business.

As a class these establishments show a marked street level localization (Figs. 6A and 6B). In only one case is any second story frontage utilized, and in no case any frontage above the second floor. Further, the establishments of this class are predominantly localized in the low rent sections of the center, with 31 store units paying a monthly front foot rental of seven and eight dollars, and only 17 paying 12 and 14 dollars respectively.

The ten restaurants of the Madison and Crawford center are a contrasting group of establishments. They are for the most part localized near the street car transfer corner, on north and south Crawford Avenue, and east on Madison Street. Here they take advantage of the nearby heavy pedestrian traffic and the low rentals. Two are Chinese and offer Oriental dishes; six are small lunch rooms serving "quick" counter meals to customers at all hours; and two others are large in occupied frontage and employ 20 and 183 persons respectively. With the exception of two small lunch rooms which buy locally, establishments of this kind purchase their unprepared food stocks from wholesale houses in the Central Business District. The customer tributary areas of these restaurants are variable in extent and depend largely on the quality of food served and on individual managerial ability. In general these areas are restricted to a half mile north, east, and south of the center, and to one mile on the west. In the case of the larger restaurants there is little extension to the east and south, but the tributary areas extend from one to two miles on the north, and indefinitely westward to include the suburbs of Oak Park and River Forest.

A food mart, located at the northwest corner of Madison Street and Keeler Avenue, is the only establishment of its kind represented at the Center. In locating this mart, the chief consideration was a site well within the center, and one favored by heavy pedestrian traffic. The site chosen combined these advantages and added the side-street parking convenience of a corner location. Further, the one-story building specially built to house this enterprise shows clearly that its retail activity is primarily concerned with the physical convenience of its customers,

and with the attractive force of its display windows. Also this structure increased interior visibility by the absence of heavy supporting uprights. Skylights were omitted to avoid the heat of the sun, which would have had a detrimental effect on the highly perishable foods on display within the building. These foods consist of a full line of groceries, fruits, vegetables, meats, dairy products, bakery goods, and liquors arranged in separate departments. In addition, there is a combination lunch and refreshment counter in one corner for the further convenience of patrons. Business is conducted on a "cash and carry" basis, and is greatest in volume during Saturday afternoon and evening. During this period from 40 to 50 per cent of the weekly turnover is experienced and customers make mass purchases of staples and Sunday table dainties. Week day business is probably of a neighborhood character, whereas on Saturdays customers are most likely drawn from the same westward-widening residential area tributary to the large restaurants of the center.

The Madison and Crawford center is adequately served by six drug stores. All but one of these stores have street level corner locations (Figs. 6A and 6B). Two establishments specialize in prescription business, one stresses its refreshment counter, and the remainder are of a general variety. The two specializing in prescriptions are favored by the immediate proximity of doctors' offices. Only one chain drug store is represented at the center. This store, located on the transfer corner, is the largest single unit of its kind at the center, and employs 14 persons. Its strongest independent competitor is located on the diagonally opposite corner. These two stores enjoy the heaviest pedestrian traffic of the center; whereas the others are favored by the heavy pedestrian traffic of Madison Street, and the crowds drawn by the large nearby motion picture theater. Drug stores enjoy their greatest volume of business during Saturday, with Sunday and Thursday as the second and third best days. Business hours are long, for the most part from 8:00 A.M. until 12:00 midnight. On ordinary week days, customers are largely drawn from the immediate neighborhood, but on Saturday and Sunday many people arrive via street car and automobile from distant points. This condition is shown by the customer tributary area of the drug stores, which is characterized by an east-west alignment widening to the west, and by a constricted eastward extent.

Besides the presence of a large food mart, the center is served by seven grocery stores (Figs. 6A and 6B). Four of these are chain stores, and three are independents. The chain stores are small, with an average of four employees; whereas the independents are large and employ 15 to 16 persons respectively. Two competitive chain groceries are located in the high rent section of the 4000 block of Madison Street; whereas the independent stores are all located in the 4200 block, where they enjoy relatively heavy pedestrian traffic and are favored by moderate rentals. With the exception of Saturday these food outlets are largely dependent on neighborhood trade from within a convenient walking distance.

This center, as in the case of most centers, is well served by confectionery stores. Five such stores are members of well known Chicago chain organizations, and the remaining three are owned by independent merchants. With one exception, these establishments are all localized on Madison Street, either near the large motion picture theater or near the transfer corner. The favorite sites are adjacent to the two theaters of the center, one of which is flanked on both sides by confectionery stores, and the other on one side (Figs. 6A and 6B). The reason for this marked localization is the obvious advantage to such stores of the candy-purchasing holiday spirit of many theater patrons. Naturally, this spirit is most manifest on Saturdays and Sundays, and on these days the confectionery stores enjoy from 40 to 50 per cent of their weekly business. In this case also, the consensus of opinion of store keepers points to a preponderance of neighborhood business during the week, and a westward-widening customer tributary area during the week-ends.

The remaining establishments of the Retail for Internal Use class represented at the center constitute an unimportant miscellaneous group. These consist of five taverns, four meat markets, three tobacco stores, three bakeries, three liquor stores, and one delicatessen.

At the Madison and Crawford center there are seventy establishments of the Retail for Personal Use class. These establishments specialize in the sale of a wide variety of clothing and other articles of a personal nature. These primarily consist of women's dresses, cloth coats, stockings, hats, shoes, fur coats, fur jackets, and lingerie; men's suits, coats, hats, socks,

underwear, shoes, shirts, and neckties; infant's wear of all kinds; and dry goods. Jewelry articles and leather goods complete the offerings. These commodities are primarily of a personal nature, fit to individual measure, or purchased to suit individual taste for personal adornment. Style is of first importance and low price is a secondary consideration. Selective buying by customers makes it necessary for each store to restock frequently. This requires the expert service of buyers who visit the Chicago and New York wholesale markets, closely follow trends of style, and personally inspect all but a few standard articles before placing their orders. Trucks arrive daily with small feature orders, and at seasonal intervals with larger full-line purchases. For the convenience of customers, these, as well as many establishments at the center, remain open until 9:30 P.M. on Tuesdays, Thursdays, and Saturdays, experiencing their largest volume of business on Saturdays and Thursdays respectively.

The specialized offerings made by many of these shops, offerings that are seldom duplicated by the smaller neighborhood stores, attract customers via automobile and street car from wide areas. This attraction is stimulated by advertisements placed in city and local newspapers, by distributing handbills throughout the West Side, and by utilizing the radio to announce special sales. The lucrative nature of this business is attested by the marked localization of these stores at street level in the high-rent 4000 and 4100 blocks of Madison Street (Figs. 6A and 6B). Here, each business day, thousands of customers are attracted by the elaborate window displays of variety offerings conducive to selective buying.

The Madison and Crawford center shows a concentration of women's clothing stores, typical of many of the other outlying centers of the City. There are 44 such establishments, of which 24 are operated by chain management and 20 are independently operated. For the most part these establishments are small, employing an average of three persons with a range from two to seven employees. Further, 20 stores deal in a general line of women's clothing; 12 are exclusively hat shops; seven specialize in fur garments; three in hosiery and lingerie; and two in cotton wash dresses. With the exception of two ordinary hat shops, these establishments are all localized on Madison Street west of Crawford Avenue. Here the greatest concentration is in the 4100 block,

where 22 such stores are located, and secondarily in the 4000 block, where 13 are represented (Figs. 6A and 6B). Most striking of all is the tendency of these stores to occupy adjacent sites, which is shown by three groups of four, two of which are in the 4100 block, and one in the 4000 block. This leads to the following conclusions: (1) that the heavy pedestrian traffic of Madison Street is a very desirable business attribute; (2) that this kind of enterprise is sufficiently lucrative to make feasible the payment of high rentals; and (3) that juxtaposition of competitors stimulates rather than decreases the trade of the individual establishments.¹ Since the factors of style leadership and reputable management are of such moment to the women's clothing line, and since shops of this kind make such highly diversified, specialized offerings, it follows that customers would be drawn from an extensive area. Here again the customer tributary area is characterized by an east-west axial alignment extensive to the west and constricted to the east, and by a relative paucity of neighborhood customers.

Madison and Crawford, in a fashion characteristic of the other centers, is served by 14 shoe stores. Ten of these have chain management, and four are independents. These stores, with two exceptions, are small, with narrow street frontage and employ an average of four persons. The two exceptions are both local stores of city-wide chain organizations, each employing 12 persons. Shoe stores are all localized at the ground level on Madison Street west of Crawford Avenue. Here they enjoy heavy pedestrian traffic, but are required to pay high rentals. There are seven separate establishments distributed in the 4000 block, six in the 4100 block, and only one in the 4200 block (Figs. 6A and 6B). Saturday is the best business day enjoyed by the shoe stores. During this interval they transact from 25 to 50 per cent of their weekly sales. Since any one person purchases relatively few pairs of shoes during the year, it follows that these shoe stores are supported by a wide customer tributary area. Here again these areas are characterized by an east-west axial alignment, extensive

¹R. M. Hurd, Principles of City Land Values (New York: The Record and Guide, 1911).

Charles C. Colby, "Centrifugal and Centripetal Forces in Urban Geography," Annals Assoc. Amer. Geographers, XXIII (1933), 1-20.

to the west and areally constricted to the east, and by a relative scarcity of neighborhood customers.

In marked contrast to the 44 women's clothing stores, there are only six men's clothing stores represented at the center; a general condition most characteristic of the centers as a group. These stores show a definite localization at, or within 25 yards of, the street-car transfer corner in street-level sites requiring the payment of high rentals. Apparently this localization evolved from a combination of three conditions: (1) that women customers at the center are much more important than men, both numerically and in the value of their purchases; (2) that a large percentage of the male customers are employed in the Central Business District, where it is more convenient for them to purchase from State Street merchants; and (3) that men's clothing stores do a larger volume of business when conveniently located to attract the more mobile male population, a population which makes use of the street-car transfer corner in going to and from work, and which is predominantly represented in the heavy automobile traffic passing this street intersection.

Three of the men's clothing stores represented at the center are independently owned, and three are operated as units of city-wide chain organizations. Saturday is the best business day, the sales of which often account for 40 per cent of the weekly trade. Customers are drawn from an extensive area because these stores are well equipped with a superior grade of men's clothing, because men buy seldom but in large quantities, and because the male population is highly mobile. As a result, the customer tributary area is characterized by an east-west axial alignment with a marked northwest, west, and southwest extent, areally constricted on the east, and by a lack of neighborhood concentration.

The remaining establishments of the Retail for Personal Use class located at the center comprise an unimportant group. These are four jewelry stores, one dry goods or general clothing store, and two leather goods stores.

At the center the Retail for Group Use class is represented by 17 establishments, chiefly engaged in selling household articles. These articles consist of furniture, rugs, and linoleum; electric refrigerators, washing machines, radios, vacuum cleaners, floor and desk lamps, fans, toasters, coffee percolators, and

clocks; and paints and varnishes, and auto supplies. Except in the case of furniture, where style is an important factor, the stores of this class are largely stocked with standard products. Orders which are largely of a seasonal character, are directly placed with various manufacturers. The largest volume of business is generally experienced on Saturdays and Thursdays, in the order named.

The lucrative nature of this class of business is attested by the localization of many such stores in the high rent 4100 block of Madison Street. The bulky nature of the commodities sold necessitate wide store frontages, account for a secondary store localization in the low rent section at the west end of the center, and for the use of upper stores for show rooms and storage space (Figs. 6A and 6B). The large size of many of these stores and their specialized offerings, combined with their city-wide advertising campaigns, result in attracting customers from wide areas.

Among the six furniture stores located at the center, three are large and employ from 11 to 22 persons, and three are relatively small with from three to five employees. Five stores are owned and operated as independent concerns, whereas the largest is a local unit of a city-wide chain organization.

At this center, as is typical of many of the other centers, there is a marked concentration of furniture stores on the periphery where moderate rents are charged for store frontage. Here two furniture stores, out of a total of four so located, are housed in wide buildings four and five stories tall (Figs. 6A and 6B). In most cases, in typical fashion, these buildings have been especially constructed to house furniture stores. They possess arcaded central entrances; large display windows allowing for the attractive arrangement of complete sets of furniture; and are equipped with auxiliary display rooms in their upper stories. These furniture stores have highly varied stocks, advertise extensively, offer liberal credit, and draw customers from a wide area. This area is characterized by an east-west axial alignment, extensive to the west and constricted to the east, and with but a minor concentration of neighborhood customers.

At Madison and Crawford there are seven electrical appliance stores. In this case the chain stores dominate the group with a total of six separate establishments. The two largest

stores employ a total of 50 persons and 12 persons respectively. The electrical appliance stores, with one exception, are all located on Madison Street west of Crawford Avenue. All of the stores but one have middle of the block, street-level sites. The one exception is located near the transfer corner, solicits the majority of its business through sales representatives, and enjoys a 50 per cent rent reduction by having a second floor site (Figs. 6A and 6B). The business of the electrical appliance stores, in a manner probably similar to such stores throughout the City, is markedly seasonal in character. Summer produces a thriving refrigerator business; winter is more favorable for the radio trade; and washing machines, though sold quite steadily throughout the year, bring the best return during the fall and spring. As in the case of the furniture stores, the specialized commodity offerings of these stores, supplemented by extensive advertising and liberal credit terms, attract customers from a wide area, which area in its general extent and alignment corresponds with that of many other large establishments at the center.

Other establishments of the Retail for Group Use class represented at the center consist of four specialty stores. These are two drapery stores, selling draperies, window shades, curtains, bed spreads, and furniture covers; one stationery and office supply store; and one chain store selling enamels, paints, and varnishes.

The Madison and Crawford center is well served by three large establishments of the Retail for Multiple Use class. These establishments consist of one department store, and two variety or five-ten and dollar stores.

The department store has a choice location on the north side of Madison Street in the 4000 block. Here it enjoys the heavy pedestrian traffic associated with proximity to the transfer corner on the east, and the large motion picture theater on the west. This strategic position is conducive to a lucrative business, makes it possible for this concern to pay a high rental for its wide store frontage, and to employ a sales force of 100 persons. Further, the large size of this establishment, its reputation for quality merchandise, and general integrity have resulted in a wide customer tributary area. This area, likewise, has an east-west axial alignment, is extensive to the west and constricted to the east, and possesses a minor neighborhood concentration so

characteristic of the larger establishments at the center.

The two variety stores of the center are operated under the names of competitive chain organizations. Both occupy choice wide sites in the 4000 block on the south side of Madison Street, and employ 25 and 65 persons respectively. In management and ownership these stores are quasi-independent. The managers in both cases are part owners of the respective local stores, and exercise complete freedom in stocking their shelves from voluminous company catalogues. In this way the advantage of chain buying power is combined with that of independent managerial ability in selecting commodities having the greatest local demand. These stores experience from 30 to 35 per cent of their weekly business on Saturdays. Low price and corresponding quality characterize most of the commodities sold. So wide is the range of articles offered that these stores attract unusually large crowds of customers. However, the managers of these stores class their business as neighborhood in character. This is probably true, due to the duplication of such establishments on nearly every neighborhood business street throughout the City. Yet, since these establishments possess such excellent sites, they probably profit in large measure by customers drawn from the same wide area tributary to the more specialized stores of the center.

In typical fashion the Madison and Crawford center, as in the case of many other centers, is well represented by a large group of persons engaged in a wide variety of personal service activities. The personal service offered ranges from the highly professionalized functions of doctors and dentists, through that of insurance and loan offices, to that performed by barbers and bootblacks. With few exceptions, these personal service functions are performed in upper story offices. Of the total frontage occupied by this class, 86 per cent is above the first floor, and 61 per cent is concentrated at the second level. The former condition may be explained by the 50 per cent decrease in rents required for upper story building space, and the latter by the detrimental effect on business activity experienced when clients are compelled to climb above the second story. In the case of the eight story and the four story office buildings, elevator service removed this disadvantage. Besides this vertical localization of the personal service functions, they show a marked concentration at or near the transfer corner (Figs. 6A and 6B). This localization and concen-

tration is in part explained by the business advantage resulting from affording clients the convenience of street car transportation in four directions; the heavy pedestrian traffic increasing the amount of non-referred or transient business calling for service; and the concentration of these functions increasing competition, making for greater individual efficiency through specialization, and attracting more clients by the greater diversity of service offered.

Within this center four national life insurance companies have established branch offices. Each of these companies possess attractive office space in modern buildings on Madison Street, with three located adjacent to the transfer corner (Figs. 6A and 6B). They employ from 10 to 50 salesmen, and office forces of from two to eight stenographers and clerks. Few clients call at these branch offices. Business, for the most part, is conducted directly by sales representatives. The branch offices are maintained for the convenience of these salesmen. Office sites were chosen with regard to residential centrality and the convenience of available transportation. Sales territories determined on the basis of population distribution are, in most cases, of a rectangular shape. These territories are further subdivided into smaller rectangular areas and assigned to individual salesmen. The branch offices at the center have sales territories which extend from Michigan Boulevard on the east to the City Limits on the west, and from two to three miles north and south of Madison Street. Therefore, in shape and areal extent the sales areas of these branch insurance offices are in marked contrast to those tributary to the other functions of the center.

The personal service functions of the center are further augmented by the occupancy of office space by 46 dentists. Many dentists share the expense of a waiting room and telephone operator with doctors or other non-competitive professional men. Without exception the dentists' offices occupy upper story space (Figs. 6A and 6B). In general dentists draw clients from the immediate vicinity. Such exceptions as exist are often the result of neighborhood clients who have moved to other sections, but continue to return to the center because they have confidence in a certain dentist. Therefore, those who have been practicing for a number of years draw clients from a wide area, whereas the younger members of the profession are largely dependent on business from lo-

cal clients.

Both in the localization of their office sites and in the nature of their clientele, the 47 doctors represented at the center present a situation comparable to that of the dentists (Figs. 6A and 6B).

Of the five cleaning establishments doing business at the Madison and Crawford center, four are merely small "depot" stores. Here garments are collected and sent by truck to large cleaning plants to gain the advantage of low competitive prices made possible by mass machine servicing. The two employees of two of these stores do a certain amount of hand pressing and needle work for customers needing immediate service, but the other two are simply equipped with a clothing rack and a camouflaged store partition. Naturally such stores do a restricted neighborhood business, as a similar service is offered on every neighborhood business street in the City. The fifth establishment is a large cleaning plant operating several of its own West side depot stores, and cleaning for a number of independent tailors as well. This plant utilizes the entire first floor and part of the second of a building on the north side of the 4200 block of Madison Street. It employs 70 persons, and a fleet of 16 delivery trucks. The business territory of this establishment is large, being bounded on Kedzie Avenue on the east, North Avenue on the north, Cermak Road on the south, and Austin Boulevard on the west (Fig. 1). Approximately 25 per cent of its business, however, is brought in and called for by neighborhood customers.

In a manner similar to several other centers, the Madison and Crawford center is served by four chain establishments engaged in making personal loans. These concerns are all located within a short distance of the transfer corner in upper story office sites. Married persons are their favored risk, and salary, automobile, furniture and co-maker loans are the chief contracts drawn. Small loans are the rule. Keen competition has tended to keep interest charges below the legal maximum of 3.5 per cent per month. These loan establishments range in size from the smallest which employs four persons, to the largest with 30 employees. Their lucrative business is shown by the presence of four competitive establishments, and by their choice of high-rent locations in close proximity to the heavy pedestrian and vehicular traffic associated with the street-car transfer corners. The closing of the

only bank at the center during 1931 probably had a beneficial effect on these loan establishments, as they took over a portion of this financial business. Naturally, such a specialized personal service draws clients from a wide area, an area which at its maximum probably extends two miles to the north, east and south, and to the suburbs on the west. Within this area, there probably is a wide scatter of customers as in the case of other specialized business functions at the center.

Within the center there are two barber shops employing six persons; whereas there are nine beauty shops with a total of 28 employees. This again roughly shows the ratio between the women and men customers at the center, weighted by the known fact that women spend several times that spent by men on personal beautification. Of the entire group there is only one chain beauty concern, and in this case the present manager acquired a local reputation during her employment in an independent shop. This condition is in agreement with the highly personalized contact-acquaintanceship nature of both the beauty and the barber business, which at this center is 80 per cent dependent upon immediate neighborhood clientele, and which therefore does not require a conspicuous location necessitating the payment of high rentals (Figs. 6A and 6B).

The remaining individual kinds of personal service functioning at the center do not warrant separate discussion. Both in total frontage occupied and the number of persons employed they have a low rank within their class. With the exception of two shoe and hat repair shops, two laundries, and one optician, who have street level shop sites in the low rent sections of Madison Street and Crawford Avenue, all the remaining personal service functions are performed in upper story building space, predominate at the second level (Figs. 6A and 6B).

The group service class ranks sixth among the other business classes at the center, and seventh in the total number of its employees. The establishments of this class primarily are differentiated from those of personal service by rendering service to family or business groups. These establishments show the same predominate second floor and subordinate, low rent first floor localization characteristic of the Personal Service class. Business is drawn from the same general area tributary to the other retail and service functions of the center.

A pioneer group service establishment at the center is represented by a local furniture storage and moving concern. Aside from its upper story storage space on the north and south sides of the 4000 block of Madison Street, it has a small first floor office in the charge of one woman who combines the functions of a telephone order-taker, bookkeeper, and stenographer (Figs. 6A and 6B). Two moving vans are kept in constant readiness; and one employee is responsible for the furniture stored in the two Madison Street warehouses. Business activity is highly seasonal, being most active during April and May, and September and October. During these seasons several extra trucks are put into service, and from five to fifteen additional men are employed. Due to the early start of this enterprise, and because its business is largely done by telephone, it has a wide service area. Roughly this area extends one mile to the south and east, two miles to the north, and to the suburbs of Oak Park and River Forest on the west.

Of the three realty offices represented at the center, two are small and employ two and three persons respectively; whereas one is large and has ten employees. All perform the same service of property renting, managing, selling, and insuring. Two are localized in the 4000 block of Madison Street on the second story level, and the other has a street level site in the low rent section of South Crawford Avenue (Figs. 6A and 6B). Functionally these realty concerns are to be characterized as seasonal in activity, and neighborhood in scope. Since most residential property is leased, and the tenure of these leases expire May First, or October First, the two periods immediately preceding and following these dates are the busiest for the realty concerns.

The location of a branch office of a New York brokerage house on the second floor of the northeast corner of Madison Street and Crawford Avenue is a most unusual local development not found at any other center. This office, which duplicates many found in the La Salle Street financial section, is large, manned by six employees, and well equipped with stock quotation boards, ticker tapes, and private wire connections to all important stock exchanges in the United States. There are a number of reasons which in part account for the decentralized localization of this branch brokerage office at the Madison and Crawford center. These are: (1) the fact that the local manager has lived on the West Side for twenty years and has developed many local

contacts; (2) the convenience of nearby intra-city transportation facilities; (3) the low rental at the center, as compared to those of the La Salle Street financial section of the Central Business District; and (4) the relative ease of parking automobiles at the center. Naturally, this specialty establishment draws on a wide clientele area, claimed to extend two miles to the north, east, and south, and indefinitely westward to the suburbs of Oak Park and River Forest.

The remaining group service functions performed at the center are truly a miscellaneous assortment. They are represented by one undertaking parlor, one automobile parking lot, one local newspaper, and one sign painting shop.

The recreational class ranks seventh among the business classes at the center, and sixth in number of employees. In a sense, recreational business functions might be classed as a form of group service, but the distinctive nature of the service rendered by the three establishments of this class sets them apart. However, their function is wholly that of a service, in which no commodities are bought and sold.

Most outstanding in this class is a large motion picture theater, located on the north side of the 4100 block of Madison Street. This theater has a seating capacity of 3,000 persons, and is one of the largest of its kind on the West Side. Daily performances begin at 1:30 P.M., and continue until 1:00 A.M., with a complete change of program each week. Here 50 persons are employed on the regular operative staff, and some 50 odd stage-show performers complete the working unit. The location of this theater was chosen for the following reasons: (1) the site had previously been occupied by a successful motion picture house; (2) the pedestrian count on Madison Street in the 4100 block was found to be high; (3) the location was accessible to street car, motor coach, elevated, and automobile transportation; and (4) the surrounding neighborhood was considered to be densely populated.

On Saturday and Sunday this theater does nearly 50 per cent of its weekly business. On each of these days over 10,000 people attend the theater. These are drawn from a wide area, which roughly extends one mile to the south and east, two miles to the north, and to the suburbs of Oak Park and River Forest on the west. Many patrons arrive by automobile, and fill all available parking space for several blocks in four directions from the

theater. The largest number, however, use the excellent street car service of Madison Street.

A smaller independent motion picture theater is located on the east side of Crawford Avenue south of Madison Street (Figs. 6A and 6B). This theater has a seating capacity of 1,250 persons, and is manned by a force of 17 employees. Typical of most movie houses of Chicago, this theater charges a low admission, does not offer a stage show, and the pictures shown are for the most part in their last run. Business in this case also is best during the week-end, at which time nearly 50 per cent of the weekly attendance is anticipated. As might be expected from the low rent location and the light pedestrian traffic of South Crawford Avenue, this small theater does a purely neighborhood business with people walking to it from their homes.

A night club, which just opened at the center, has a choice location in the 4000 block on the north side of Madison Street. Here it enjoys the advantage of heavy pedestrian traffic, and yet pays a relatively low rent due to its second story location. The large size of this establishment, easily seating 100 guests, employing a permanent staff of 15, offering dance orchestra and floor show entertainment, and restaurant service, makes it likely that its future clientele will be drawn from a wide area. These patrons, who probably will arrive via automobile, will find convenient parking facilities on Madison Street after the 9:30 P.M. retail store closing hour.

Residential functions.--A total of 467 horizontal yards, or 12.4 per cent of the building frontage at the center is devoted to residential purposes. This residential frontage, which is all localized above the first floor, consists of 5 and 8 room apartments. This residential use of the upper stories is found almost exclusively in buildings from twenty to forty years old, as the newer structures have been built to furnish office space for service establishments in their upper stories (Figs. 6A and 6B). These apartments may be classed as residentially undesirable. Not only are they undesirable because of age, but because of the noise made by street cars and crowds of pedestrians, the lack of shade trees, the wind blown dirt and rubbish accumulated on the busy streets, and the danger of vehicle traffic to children. Probably their low 25 and 50 dollar monthly rental is the chief reason why they are not all standing vacant.

Vacant property.--Over 20 per cent of the combined frontage of the center is vacant, and of this 86 per cent consists of business office space. Real estate incomes, however, are not as badly cut as this figure might indicate, for the largest rentals are collected on the first floor frontage, and at this level there are only three vacancies. Great realtor activity is noticeable in the case of these first floor vacancies. The store windows are kept washed; signs indicate their desirability and the willingness of agents to show the premises. Less hope of renting the vacant upper story property is evidenced by dirty windows, and the absence, for the most part, of realtors signs. These conditions indicate the relatively healthy state of retail business at the center, and the fact that horizontal expansion among such functions is likely in the near future. Further, the superabundance of upper story office space probably answers the question of why many of the newer buildings are only two stories in height.

Functional problems.--One of several functional problems at the center is that resulting from the congestion of parked automobiles. The legal parking capacity is divided between 272 diagonal parking spaces on Madison Street west of Crawford Avenue, 75 horizontal spaces on Madison Street east of Crawford Avenue, 50 on Crawford Avenue north and south of Madison Street, and 110 on the adjacent side streets. This gives a total of 507 legal parking spaces. Taken jointly, at no time between 7 A.M. and 7 P.M. is the legal capacity of this parking space exceeded, but during the afternoon and evening "rush" hours on Madison Street west of Crawford Avenue, it is frequently exceeded by illegal "double parking." This practice constitutes the parking of automobiles behind those occupying the legal curb-side space, and it creates the outstanding parking problem of the center. Its solution is essential to relieve the resulting dangerous traffic congestion on Madison Street, congestion accompanied by numerous automobile collisions and injuries to pedestrians. Unfortunately, this parking problem is not sufficiently relieved by the free parking lot maintained by the local business men's club. This parking lot, which accommodates less than 75 automobiles, is situated east of Crawford Avenue on the south side of Madison Street (Figs. 6A and 6B). This location is disadvantageous as the majority of incoming motorists who approach the center from the west, must traverse the "bottle neck" of traffic congestion at the trans-

fer corner of the narrow section of Madison Street before reaching the parking lot. A practical solution for this parking problem would be the police enforcement of a one-hour curb-side parking limit between 10 A.M. and 9 P.M. for the entire center. This would remove the cause of the problem by making sufficient legal parking space available at all times. Naturally, those continuing in the practice of double parking should be subject to immediate arrest, at which time the officer in charge might suggest that there is ample space available on the nearby side streets.

Another functional problem results from the absence of a bank at the center. Between 1929 and 1933 the outlying banks of Chicago experienced a disastrous financial panic. Of the 199 banks located outside the Loop, 163 closed their doors and entered a period of liquidation, whereas only 16 per cent, or 33 banks, weathered the Depression.¹

A newly consolidated state bank, located at 4010 West Madison Street, closed its doors the day of June 11, 1931. This action effected between 25,000 and 30,000 clients, froze deposits aggregating ten million dollars, deprived local business men of much of their working capital, and its effect has continued as a great detriment and inconvenience to local business activity to the present time. No longer are large crowds of potential cash customers drawn to the center to do business at this bank; and in spite of the aid given by local loan establishments, the check-cashing activity of the food mart, and the department store, the absence of a full-function bank has materially decreased local business.

There is a considerable agitation among local business men for the re-establishment of a bank somewhere within the center. Thus far no financial interests have been sufficiently attracted by the opportunities offered by local investment. The chief investments available would from necessity be made in local real estate, and since such financing was the immediate cause of the failure of the local bank, the situation at present is most unattractive. When the depressed state of local real estate has been rehabilitated to anything like its former earning power, and when the improvement of general economic conditions restores public confidence and savings, there is every likelihood that a new

¹Hoyt, op. cit., p. 253.

bank will be established at the center.¹

Still another functional problem at the center is that of street and sidewalk cleanliness. The usual city street cleaning agencies are apparently inadequate to relieve the excessive accumulation of dirt, newspaper litter, and general rubbish on the streets and sidewalks of the center. This litter is the natural result of business activity, in which customers rid themselves of unnecessary newspapers and package wrappers by carelessly throwing them on the streets and sidewalks. These are then ground under foot, and blown by the wind to the general inconvenience and irritation of all. At present the procedure followed by the store keepers is to sweep the accumulated debris into the streets. However, this is of no avail, as on windy days it is promptly blown back to the sidewalks. A logical solution would be for all local merchants to contribute a few cents daily to hire a sidewalk sweeper to actually remove the paper litter and rubbish from the premises.

The final and probably the most important problem of the center is that of its functionally asymmetric position with reference to its customer tributary area. Random samples of the customer addresses of a number of establishments located at Madison and Crawford (shown in composite form by Fig. 7), shows this functionally asymmetric position. It is apparent that this tributary area possesses a marked east-west alignment, extensive to the west and northwest, and relatively restricted to the south and east. It is difficult to determine to what degree this condition of functional asymmetry constitutes a real problem to business at the center, and similarly it is difficult to suggest some solution if the existence of such a problem may be conceded, but it is relatively simple as well as pertinent to designate those factors in part explaining this condition.

That functional asymmetry is considered a problem to business at the center is attested by a number of business men who are of the opinion that local business is "slipping" and that too many of their best customers are moving westward where they may trade conveniently at the Oak Park business center. They state that unless improvement is shown in the next few years they will seriously consider moving their respective establishments farther to the

¹Information from John H. Kenna, former Vice-President of the Garfield State Bank, obtained during May, 1934.

west. They feel, however, that position is not the only important factor, and state that an influx of low wage-earning Jewish and Italian elements from the southeast are "deteriorating" the neighborhood, and that unless a bank is re-established and a large department store is attracted, the "Street" will soon be fit for "cheap goods" chain stores.

The functionally asymmetric position of the center is in part explained by a number of related factors. These are: (1) the attractive force of the Central Business District and the absence to the west and northwest of competing business centers in part explains the east-west axial alignment and the west and northwest extension of the customer tributary area (Fig. 1); (2) the presence of a major outlying business center at Madison and Kedzie, the superior attraction of the Central Business District, the presence of Garfield Park, and the difficulty of access from the east resulting from the narrow condition of Madison Street east of Crawford Avenue in part explains the restricted eastward extent of the customer tributary area (Figs. 1 and 3); (3) the Chicago Northwestern Railroad yards and a competing business center at North and Crawford in part explains the restricted northward extent of the customer tributary area (Figs. 3 and 1); and (4) the transportational barrier produced by extensive manufacturing areas, and by the suburban boundaries of Cicero and Berwyn, as well as the presence of a competing center at Roosevelt and Kedzie in part explains the restricted southward extent of the customer tributary area (Figs. 3 and 1).

No single solution may be prescribed for this problem of functional asymmetry. Individual initiative must and will dictate the action taken by every establishment at the Madison and Crawford center, and for each the problem assumes a different aspect. Stores catering to a high class trade might profit enormously by moving to the Oak Park center at Lake Street and Harlem Avenue. A general exodus to Madison Street and Cicero Avenue might be advantageous from the standpoint of greater centrality, but functional inertia, and the attraction of the old center at Madison Street and Crawford Avenue, might be detrimental or ruinous, if only a few establishments moved to this new location. Perhaps it would be better for the high class stores to move to Oak Park, and for those remaining to adjust their merchandising to cater to the low wage-earning elements said to be repopulating the Garfield

Park community. Perhaps civic pride may rehabilitate deteriorating real estate in Garfield Park so that better populational elements may be attracted, and so that those already living within the community may be induced to remain. In this way present conditions at the Madison and Crawford center may be maintained.

The future, based on the evidence at hand, may not be predicted with a likelihood of fulfillment under these complex conditions of human inter-relationship. It must suffice to point out significant present day aspects and relationships, and to indicate as many different courses of future action as might be followed. Surely the day is not remote when the decentralizing centrifugal forces at work within the Chicago Urban Area will reach a point of diminishing returns,¹ and people will not be constantly on the move to newer peripheral quarters, leaving deterioration, tax delinquence, and vice areas in their wake.

Section 6. Conclusions, Hypotheses and Recommendations

This dissertation, it should be recalled, sought to present a twofold analysis of the major outlying business centers of Chicago. That the first analysis sought to discover the general character of the centers as a group on the basis of their street frontage use and to relate their character to the spacial, population, and transportation setting of Chicago; and that the second analysis sought to discover the specific functional character of a center selected as representative of the centers as a group. This twofold analysis led to twenty-seven conclusions of which the first eleven were drawn from the general character of the centers as a group, and the remaining sixteen from the specific functional character of the most representative center. These conclusions are substantiated in varying degree by the facts developed during the progress of the analysis. In addition, six hypotheses are given, which, though not herein completely substantiated, are nevertheless strongly suggested by the analysis. Finally, several related investigations are recommended which would do much to complete the study of the major elements of the business structure of the City of Chicago.

Conclusions.--The following conclusions are drawn from the foregoing analysis of the outlying business centers of Chicago:

1. That from a total of 112 outlying business centers, 20 are of major and 92 of minor size and significance.

¹Colby, op. cit.

2. That the centers are commercially favored by a wide decentralized spacing, which in relation to the Central Business District is rendered more advantageous by the increase in actual street distance over linear distances, and which, with reference to the inter-relationship of the centers, has resulted in a degree of isolation relatively free from business rivalry.

3. That the decentralized centers are commercially favored by their close proximity to the decentralized population of Chicago, a population, for the most part, with an increasing residential density and a high per capita buying power.

4. That the centers are further rendered accessible to the commodity purchasing and service paying resident population of Chicago by being most adequately served by street car and vehicular transportation, to the end that an average of over 100,000 passengers per day leave and enter each center.

5. That the individual kinds of street frontage use characterizing the centers consists of "five and ten cent" stores, women's and men's clothing stores, furniture stores, dentists' and doctors' offices, motion picture theaters, restaurants, shoe stores, and drug stores.

6. That the centers as a group possess a high proportion of vacant property, of which that suitable for business use predominates.

7. That within the centers, apartments occupy considerably more frontage than that occupied by hotels.

8. That combining the frontage of all the centers, on the basis of the per cent of vacant property and the per cent of business concentration, the commercial condition of the street level frontage is healthy, the second story is relatively unhealthy, and the levels above the second story are most unhealthy.

9. That the individual centers vary greatly in size, in business concentration, in retail concentration, and in service concentration.

10. That, on the basis of the per cent of vacant property, the commercial condition of six centers is healthy, of ten centers is normal, and of four centers is most unhealthy.

11. That the commercial health of the individual centers is chiefly related to the transportation accessibility or relative inaccessibility, afforded by street cars and vehicles, of the adjacent densely or thinly populated residential areas, either to and from each center, or to and from the Central Business District.

12. That Madison and Crawford was selected as the most representative center when equal weight was given to three distinguishing characteristics, namely functional composition, size, and population density; characteristics possessed in common by all of the major outlying business centers of Chicago.

13. That the population density setting of the Madison and Crawford center, varying from 20,000 to 100,000 inhabitants per square mile, represents an average condition for centers within the City, but that this setting is disadvantageously limited in extent to the north, east, and south by encircling non-residential areas.

14. That the Madison and Crawford center has a central

position between the poor inner residential section of the City, and the excellent residential section of the western suburbs; and that its immediate surrounding area possesses a heterogeneity of conditions in which "good" and "fair" residential classes predominate.

15. That the Madison and Crawford center is favored in its transportation setting by adjacent or nearby street car and vehicular transportation, and by its location at the most westerly important north-south transfer point on Madison Street; whereas it is handicapped by being encircled to the west and southwest by suburban boundaries, which produce an extra-fare break in several of its tributary transportation lines, and by its position adjacent to lanes of direct elevated and motor coach transportation and boulevard systems, affording the best access from the West Side to the Central Business District.

16. That the Madison and Crawford center, which is characterized by its multi-storied business concentration, dominates the competing neighborhood business streets of single story business use within one mile of the intersection of Madison Street and Crawford Avenue.

17. That the Madison and Crawford center possesses the form of a cross, with its longest axial extension to the west; that this cross is grooved by two main streets and adjacent sidewalks of varying widths; and that it is incased in business buildings predominantly of two, but varying from one to eight stories in height.

18. That the most significant functional traffic site conditions of the Madison and Crawford center are the excessive vehicle and street car congestion at the Madison Street "bottle neck," and the marked pedestrian concentration associated with the street car transfer corners.

19. That of the business functions at the Madison and Crawford center, the retail classes far outrank the service classes, both in frontage occupied, and in total numbers employed, but that the personal service class outranks any other single class.

20. That within each class of business function at the Madison and Crawford center, from two to five individual kinds of establishments far outrank any other kinds.

21. That the retail establishments of the Madison and Crawford center, for the most part, buy their commodities through Chicago or Eastern wholesale concerns; that, with the exception of standard nationally advertised commodities, store "buyers" personally inspect the desired articles before placing orders; that incoming articles are delivered to individual stores by delivery trucks; that these stores are localized at street level where their window displays may attract passing pedestrians; and that although there is a wide variation between the specialty stores drawing customers ten miles or more, and the small food stores with restricted neighborhood clientele, in general the customer tributary area of the retail establishments shows a marked east-west alignment, extensive to the west and northwest, and restricted to the east.

22. That the service and recreational functions performed at the Madison and Crawford center are of a wide and heterogeneous character; that these functions show a marked second floor and subordinate low rent first floor localization and that clients and

customers are drawn from a tributary area for the most part more restricted than that of the retail establishments, but showing the same general shape and alignment.

23. That the relatively high proportion of residential building use at the Madison and Crawford center consists of five and eight room apartments all localized in the upper stories of old buildings; and that these apartments, due to age, and their noisy, dirty, unshaded, and dangerous surroundings, are residentially most unattractive.

24. That the relatively high proportion of vacant property at the Madison and Crawford center, consisting largely of business office space, is almost entirely localized in the low rent upper stories; and that the scarcity of vacant first floor space indicates the relatively healthy status of retail business, the likelihood of horizontal expansion, and explains the two story construction trend manifested by the newer buildings.

25. That the chief parking problem at the Madison and Crawford center results from the dangerous and illegal practice of "double parking" on Madison Street; that this problem is inadequately relieved by the small sized poorly situated free parking lot; and that its solution will necessitate the enforcement of a one hour curb-side parking limit to make sufficient legal parking space available at all times.

26. That the closing of a local bank, which froze the 10 million dollar assets of nearly 30,000 depositors, resulted in an acute banking problem greatly detrimental to present day business activity at the Madison and Crawford center; and that the solution of this problem awaits the rehabilitation of local real estate values and the improvement of general economic conditions to a level justifying the establishment of a new bank.

27. That the functional asymmetric position of the Madison and Crawford center in relation to its customer tributary area is recognized by the heads of a number of establishments as a local business problem which may necessitate store relocation; that this condition of asymmetry is, in part, explained by such factors as the attractive force of the Central Business District, the competition of nearby major centers, and the disadvantageously limiting proximity of Garfield Park, railroads, manufacturing areas, and suburban boundaries; and that no single solution may be prescribed for this problem of functional asymmetry, and the future course of action which might be taken by local business men may not be predicted with a likelihood of fulfillment under existing complex conditions of human inter-relationship and freedom of choice.

Hypotheses.--The following hypotheses are drawn from the foregoing analysis of the major outlying business centers of Chicago:

1. That a number of uprooting tendencies, such as the deterioration of real estate, dirty, noisy surroundings, the lack of play space for children, the danger to children resulting from traffic congestion, the nuisance of soot-filled air, and the high property taxes at work within the older portions of Chicago, and the attractive qualities within the peripheral areas, such as newer residences, ample play space for children with little danger from traffic congestion, clean, quiet surroundings, low property taxes, and improved transportation facilities to and from the Cen-

tral Business District have combined to produce a centrifugal force in large measure accounting for the decentralization of residential settlement manifested by densely populated outlying areas, and the development of the twenty major outlying business centers which meet the commodity and service needs arising within those areas.

2. That these outlying business centers receive only a small portion of the potential business volume represented by their surrounding customer tributary areas, and that the major portion of this business volume is attracted by the Central Business District.

3. That over half of the customers attracted to the outlying business centers are women; many women preferring to shop near their residences because the time consumed in rearing a family limits their shopping time, a limited budget encourages walking, and space for parking an automobile can commonly be found at any of the centers.

4. That outlying business centers rise and fall, become of major size or retrograde into the minor size class, as the residential areas they serve improve or deteriorate.

5. That the presence of suburban boundaries causing an extra-fare break in the transportation lines of Chicago is a limiting factor in the growth of most major outlying business centers, and, in part, accounts for their location well within the urbanized portion of the city, although densely populated areas may extend for several miles beyond the municipal limits.

6. That the outlying business centers of Chicago are satellites of the Central Business District, and although individually they are completely eclipsed in importance by the latter, their aggregate business turnover probably approximates two-thirds that of the dominant district.

Recommendations.--Finally, this analysis has suggested several additional studies which would not only add to our present knowledge of the outlying business centers of Chicago but would further a relatively complete understanding of other major elements of the business structure of this City. Particularly valuable would be a historical analysis of one or more of these major centers, with a view to discovering the centrifugal and centripetal forces which have shaped their growth, and in some cases have caused retrogression. In addition, a functional study of the central business district is needed, treating, in so far as possible, its historical development. Other desirable information would include data: (1) on the character and extent of customer tributary areas; (2) on foot-frontage rentals, the growth and influence of chain stores and pedestrian traffic in the major outlying business centers and neighborhood business streets; and (3) on the factors explaining the restricted local importance of neighborhood business streets. These are only a few of the more important aspects

of the business structure of Chicago still to be investigated in order to supply an adequate background for understanding its business functions and its manifold interrelations.

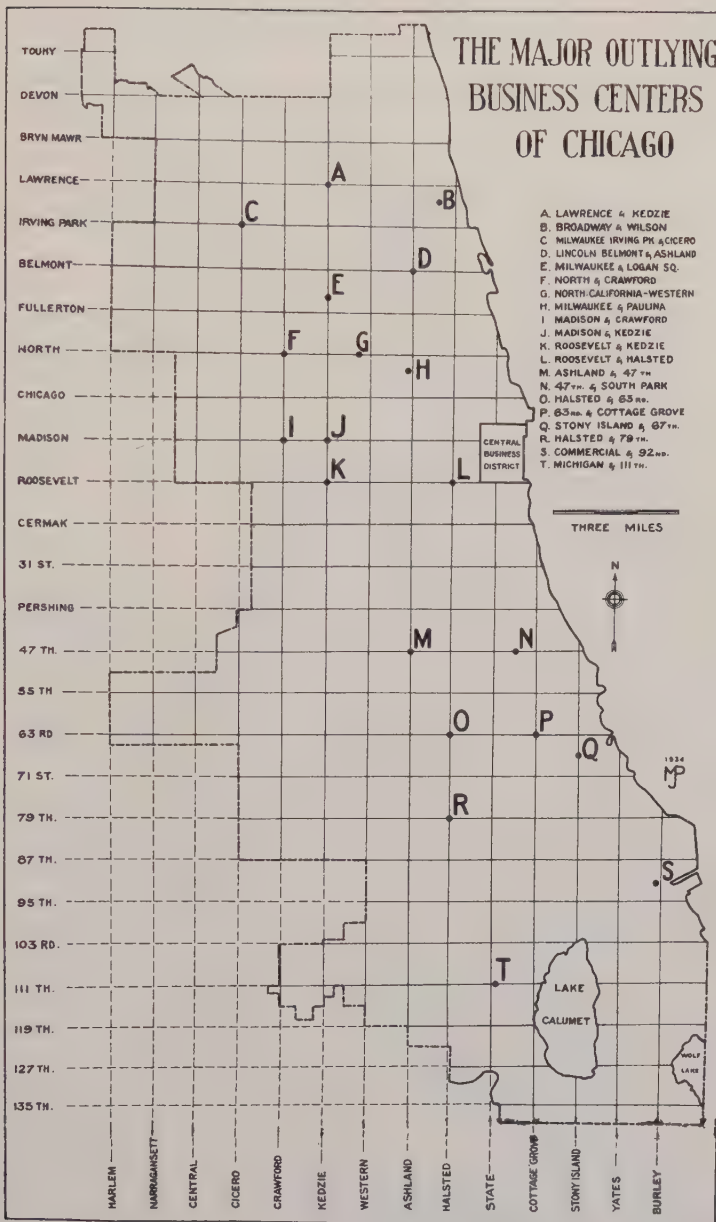


Fig. 1

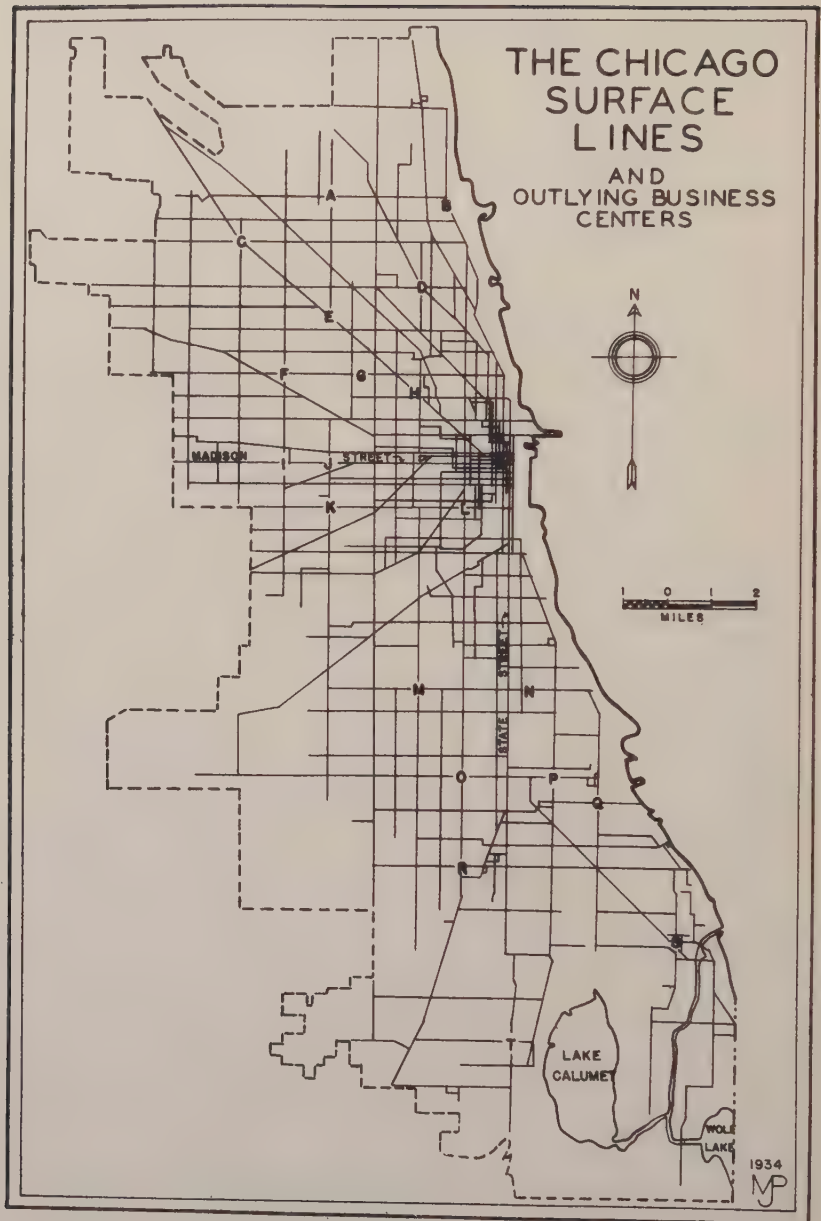


Fig. 2

A SECTION OF CHICAGO SHOWING THE POPULATION DENSITY PER SQUARE MILE



Fig. 3

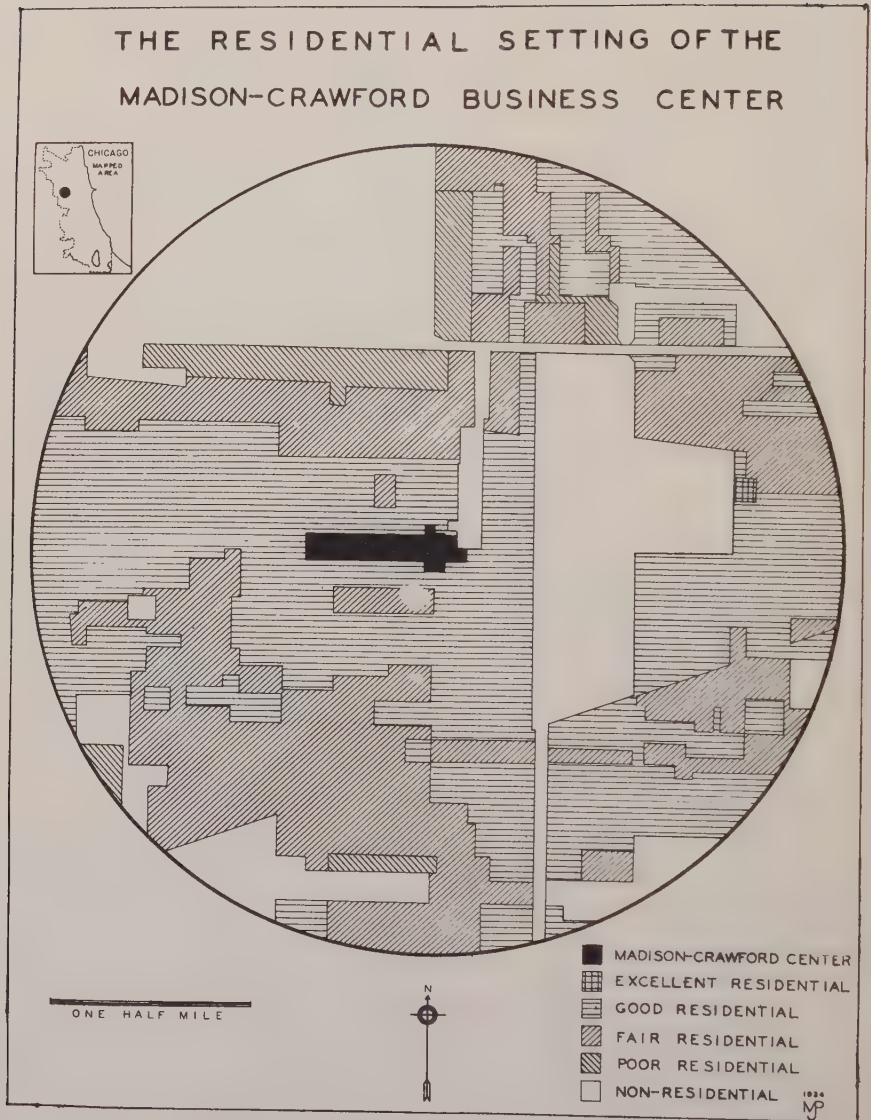


Fig. 4

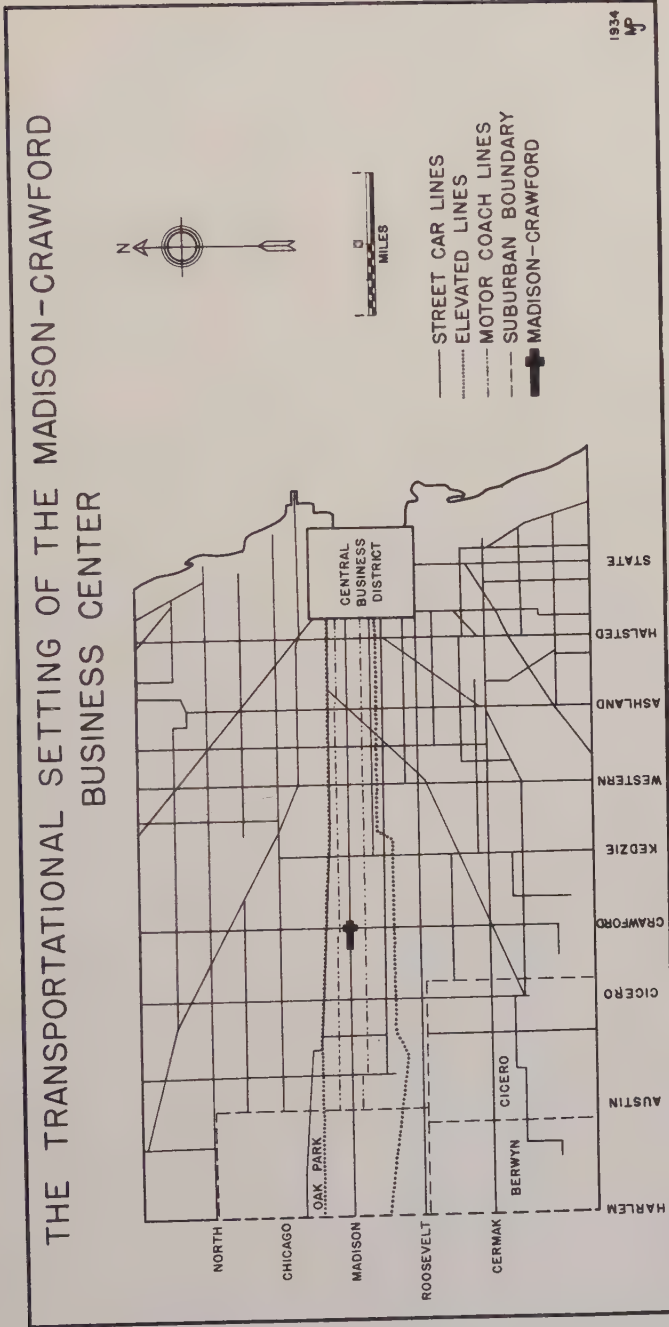


Fig. 5

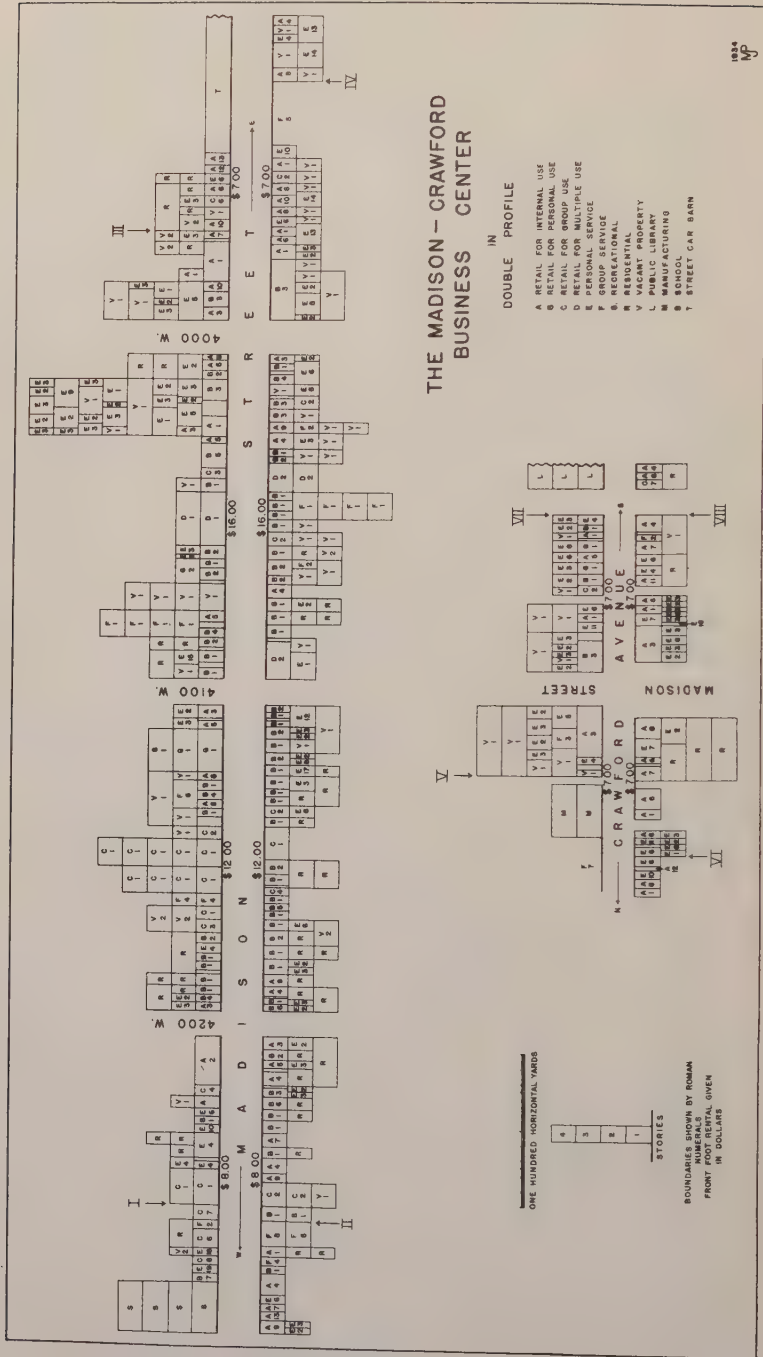


Fig. 6A

<u>A. Retail for Internal Use</u> 1. Restaurants 2. Food Mart 3. Drug Stores 4. Grocery Stores 5. Confectioneries 6. Taverns 7. Meat Markets 8. Tobacco Stores 8. Bakeries 10. Liquor Stores 11. Delicatessen 12. Milk Store 13. Fruit and Vegetable Stores	<u>E. Continued</u> 6. Beauty & Barber Shops 7. Shoe & Hat Repair Shops 8. Chiropodists 9. "X"Ray Laboratories 10. Laundries 11. Opticians 12. Beauty College 13. Music School 14. Dancing Schools 15. Suit Rental Shop 16. Lawyers 17. Fur Repaid Shop 18. Tailors 19. Photographer
<u>B. Retail for Personal Use</u> 1. Women's Clothing Stores 2. Shoe Stores 3. Men's Clothing Stores 4. Jewelry Stores 5. Clothing Stores 6. Leather Goods Stores 7. Gift Shops	<u>F. Group Service</u> 1. Furniture Storage 2. Realtors 3. Brokerage Office 4. Undertaking Parlor 5. Auto Parking Lot 6. Sign Painters 7. Gasoline Stations 8. Garages
<u>C. Retail for Group Use</u> 1. Furniture Stores 2. Electrical Appliances 3. Drapery Shops 4. Stationery Stores 5. Paint & Varnish Stores 6. Hardware Stores 7. Florist Shops 8. Rug Stores	<u>G. Recreational</u> 1. Motion Picture Theaters 2. Dance Halls
<u>D. Retail for Multiple Use</u> 1. Department Stores 2. Variety Stores	<u>R. Residential</u>
<u>E. Personal Service</u> 1. Insurance 2. Dentists 3. Doctors 4. Cleaners 5. Loans (Personal)	<u>V. Vacant Property</u> 1. Suitable for Business 2. Suitable for Residence
	<u>L. Public Library</u>
	<u>M. Manufacturing</u>
	<u>S. Public School</u>
	<u>T. Street Car Barn</u>

Fig. 6B. The above legend is to be used as a supplement for Fig. 6A, in identifying the individual kinds of business establishments at the Madison and Crawford Center.

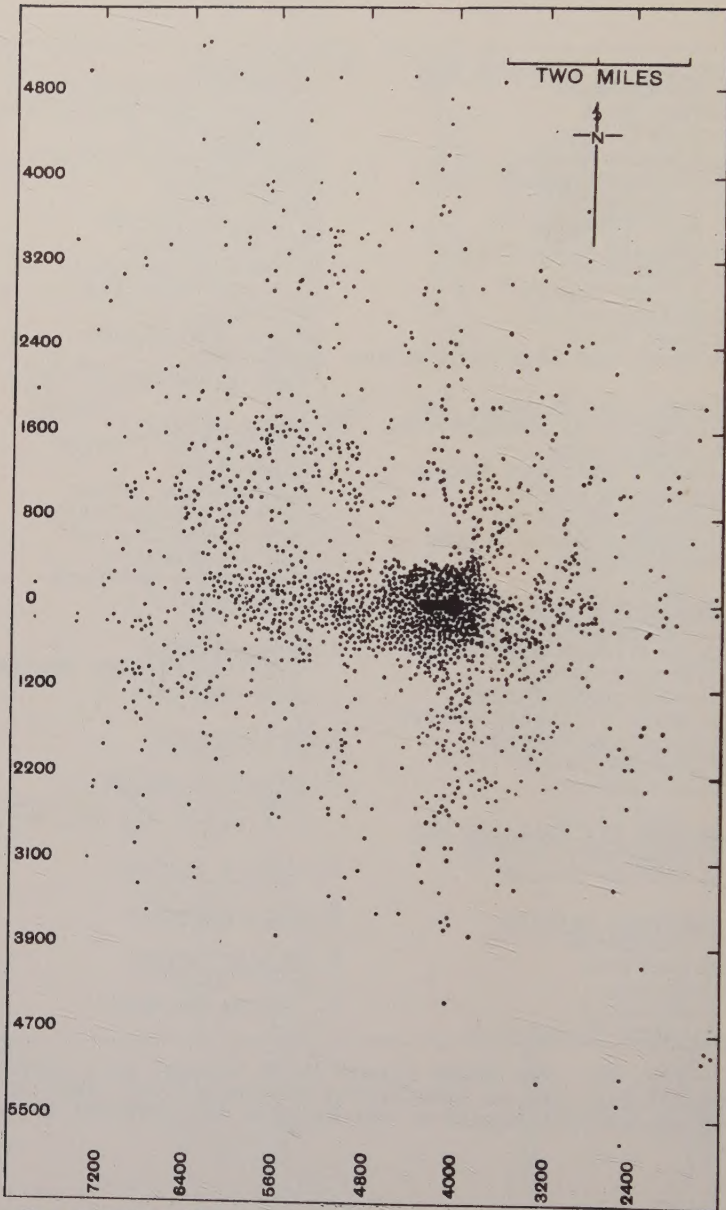


Fig. 7.- A composite sample of customers' addresses taken at random from the mailing lists of thirteen retail and service establishments located within the Madison and Crawford Center, obtained during April, 1934. Each dot locates one address; the black cross represents the Madison and Crawford Center.

